Designing and Managing Fisheries Data Systems that Support the NOAA Data Quality Act: A Case Study Using the Hawaii Longline Observer Program

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NOAA Fisheries - Pacific Islands Fisheries Science Center

Honolulu, Hawaii

FIS Conference 2003

18 November 2003

Asking the Hard Questions…

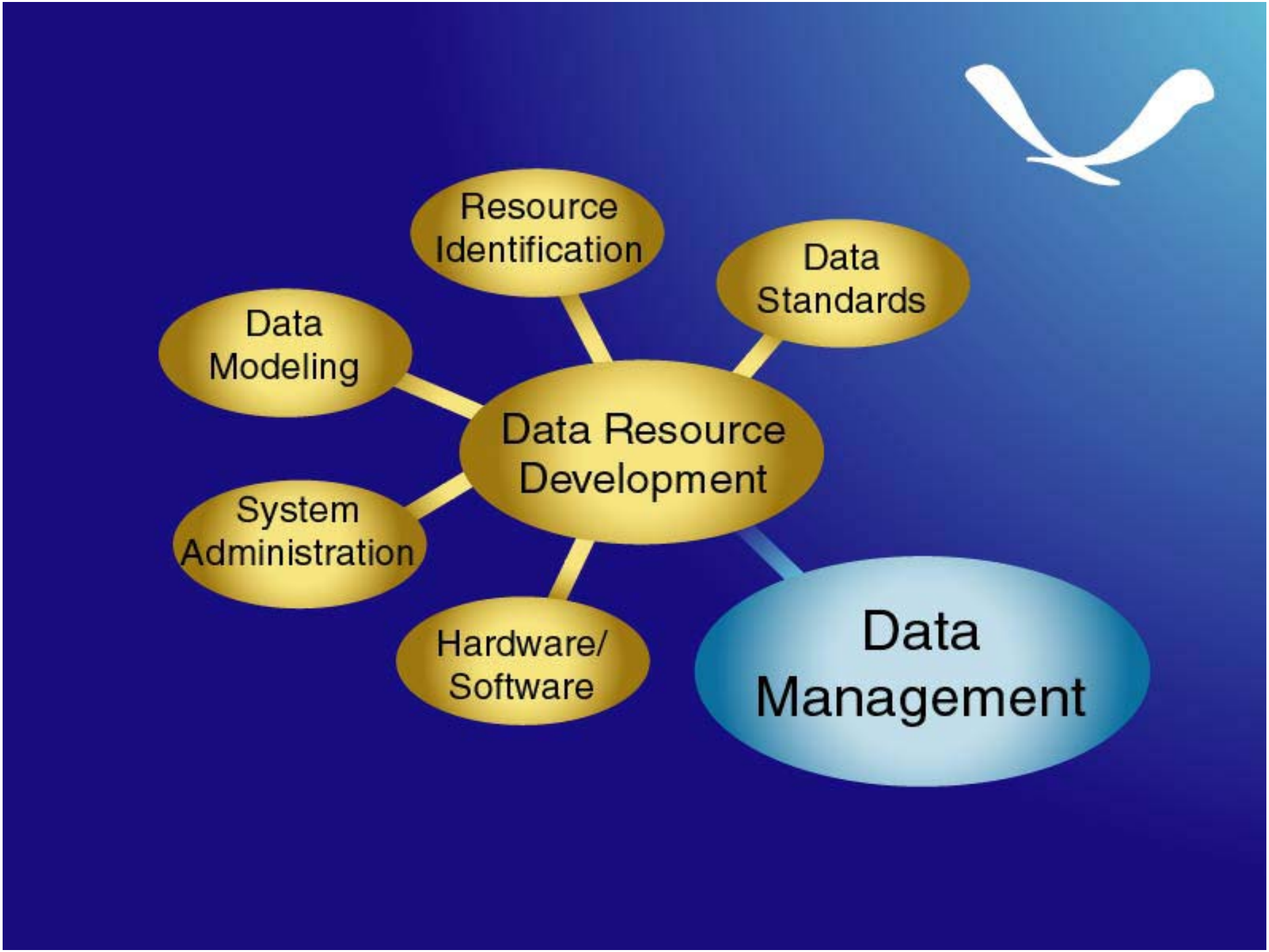
- Can I prove that my data is as good as I think it is?
- Do I really know why we've been collecting that piece of data for the past ten years?
- Do I worry that my data will be misinterpreted when it is released?
- Can I really be sure that my data hasn't been corrupted?
- Do I dread running into my data users in the coffee room?
- Can I handle even a minor system modification?
- Is linking related data sets a nightmare?
- Are my users all reporting off the same instance of the data?

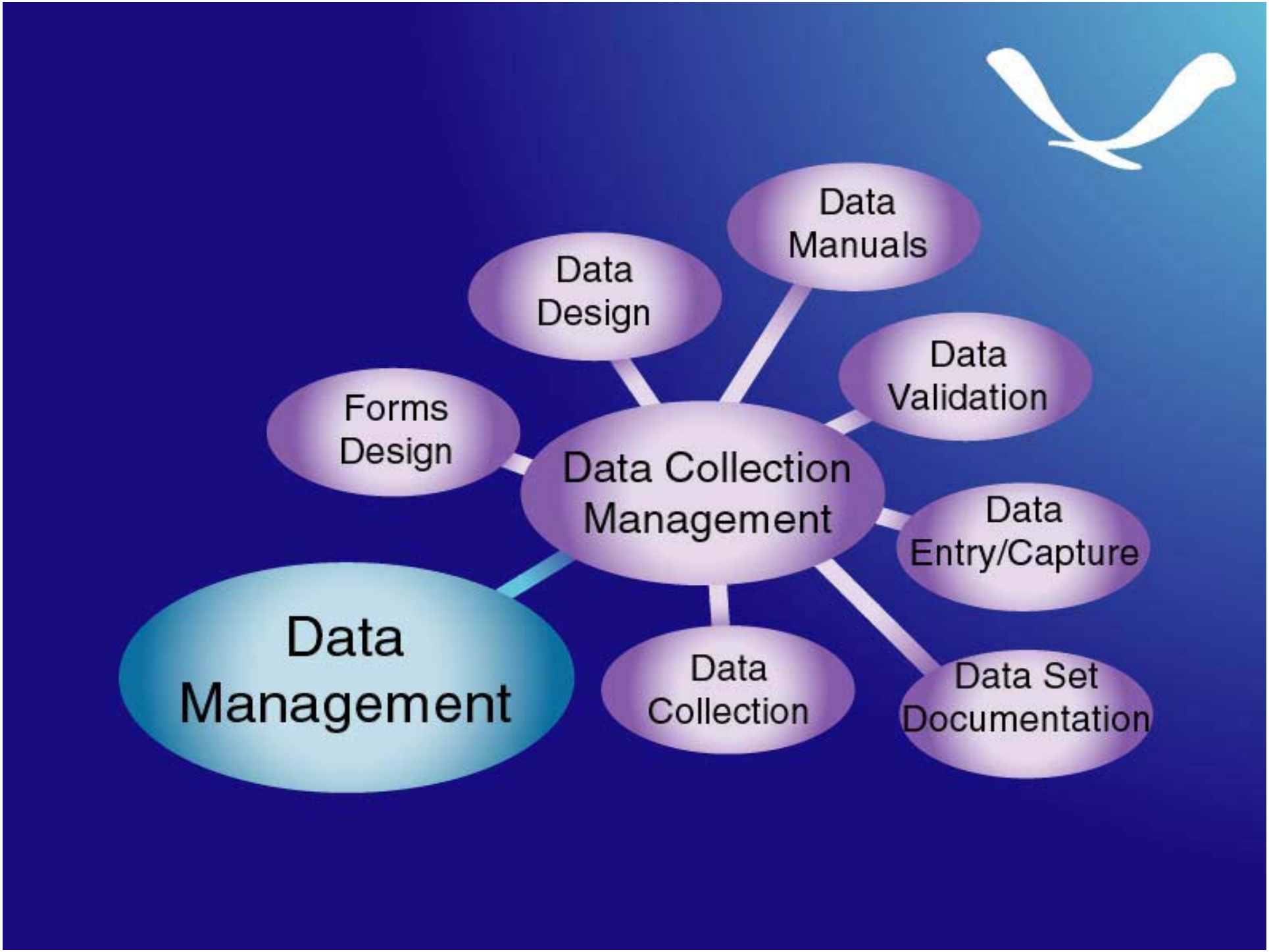
A Mission Born out of Passion and Frustration…

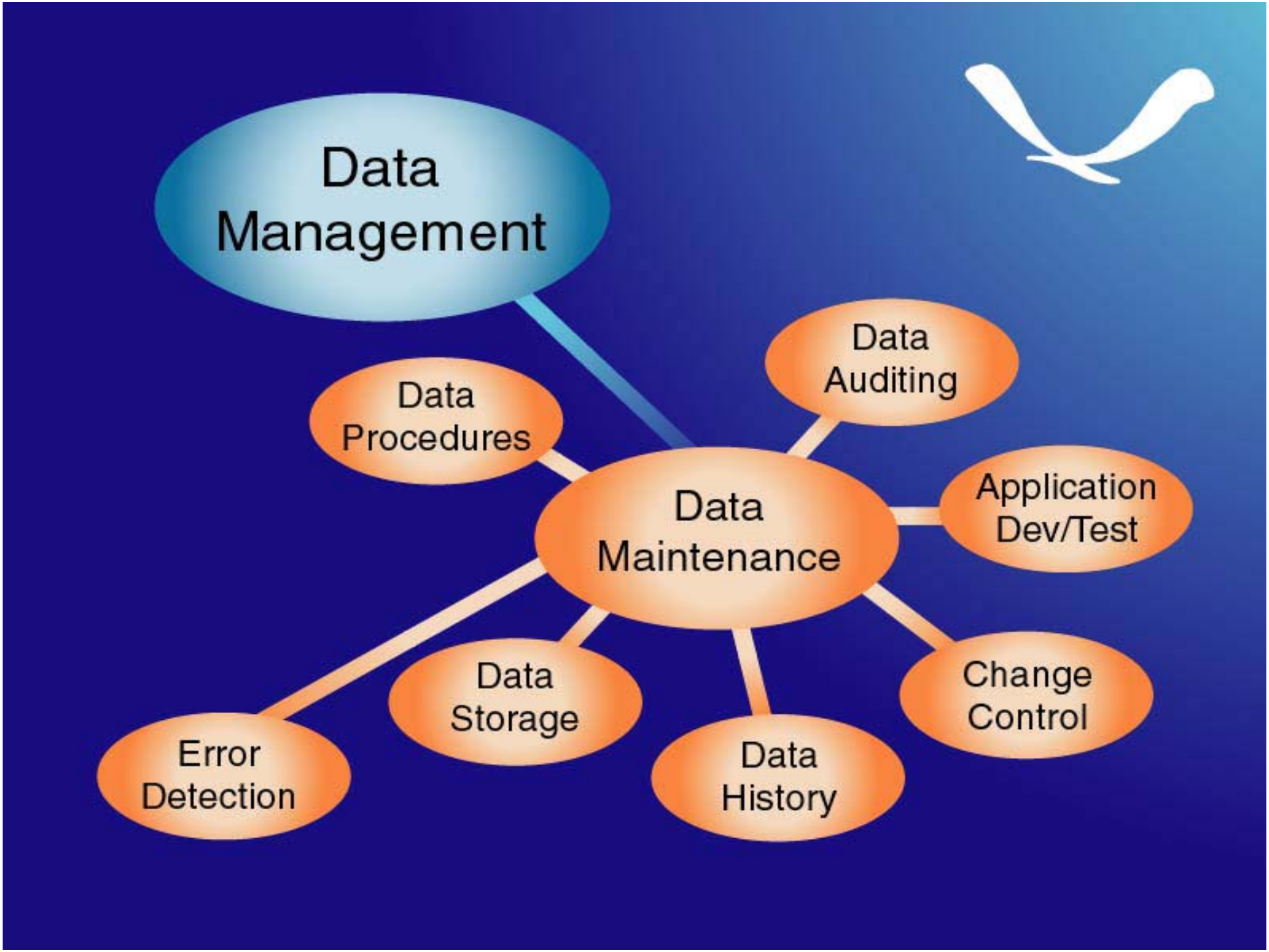
- Poor data quality
- Data contamination during processing steps
- Inadequate documentation
- No change control procedures
- Poor communication between data role groups
- Unreasonable time for data dissemination
- Summary reporting from multiple – and different – data sources

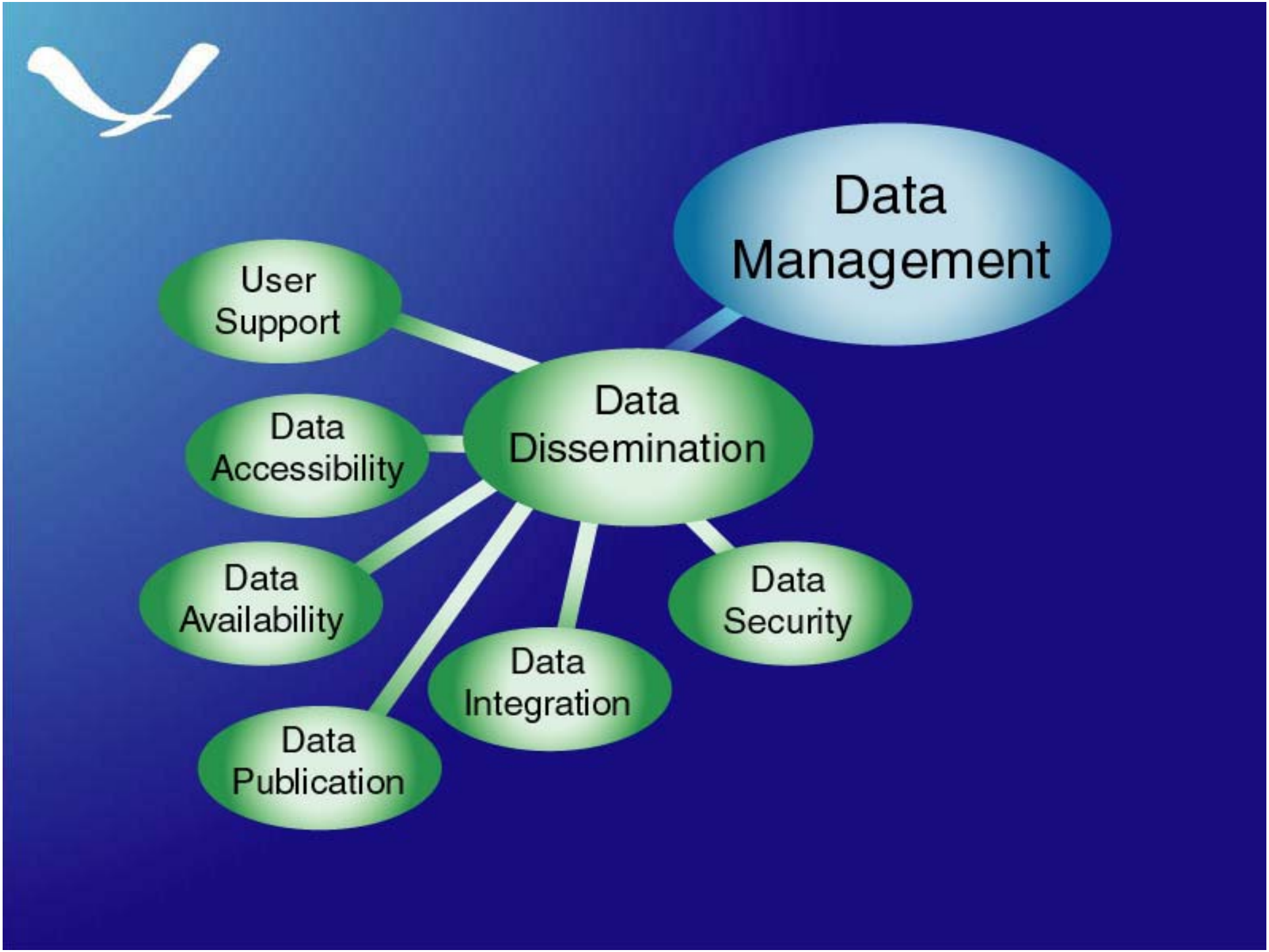
What Is Data Management?

It's Not Just Archiving!

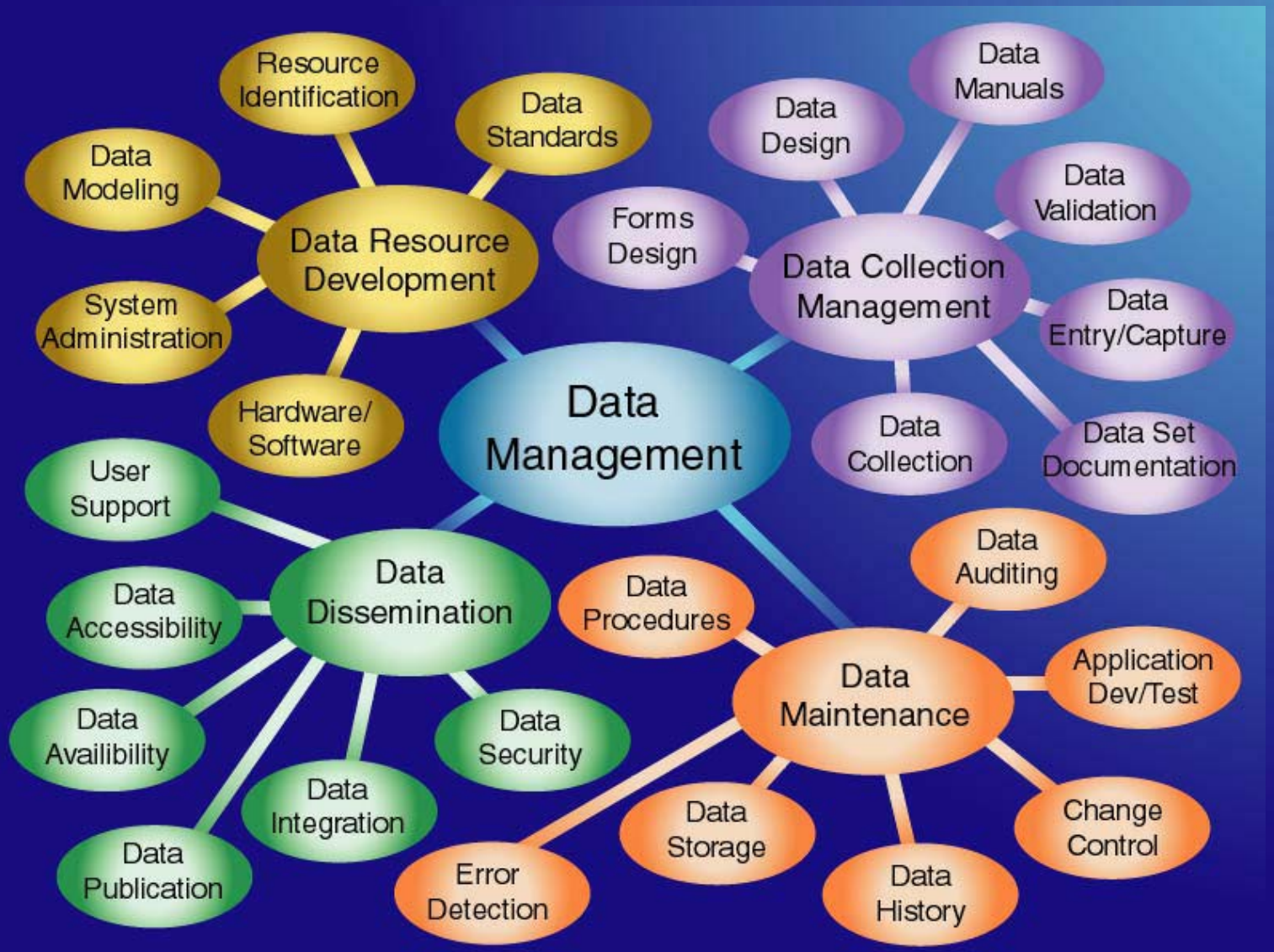

Resource Identification
Data Standards
Data Modeling
Data Resource Development
System Administration
Hardware/ Software
Data Management


Data Management
Data Collection Management
Forms Design
Data Design
Data Manuals
Data Validation
Data Entry/Capture
Data Collection
Data Set Documentation


Data Management
Data Procedures
Data Auditing
Data Maintenance
Application Dev/Test
Error Detection
Data Storage
Data History
Change Control

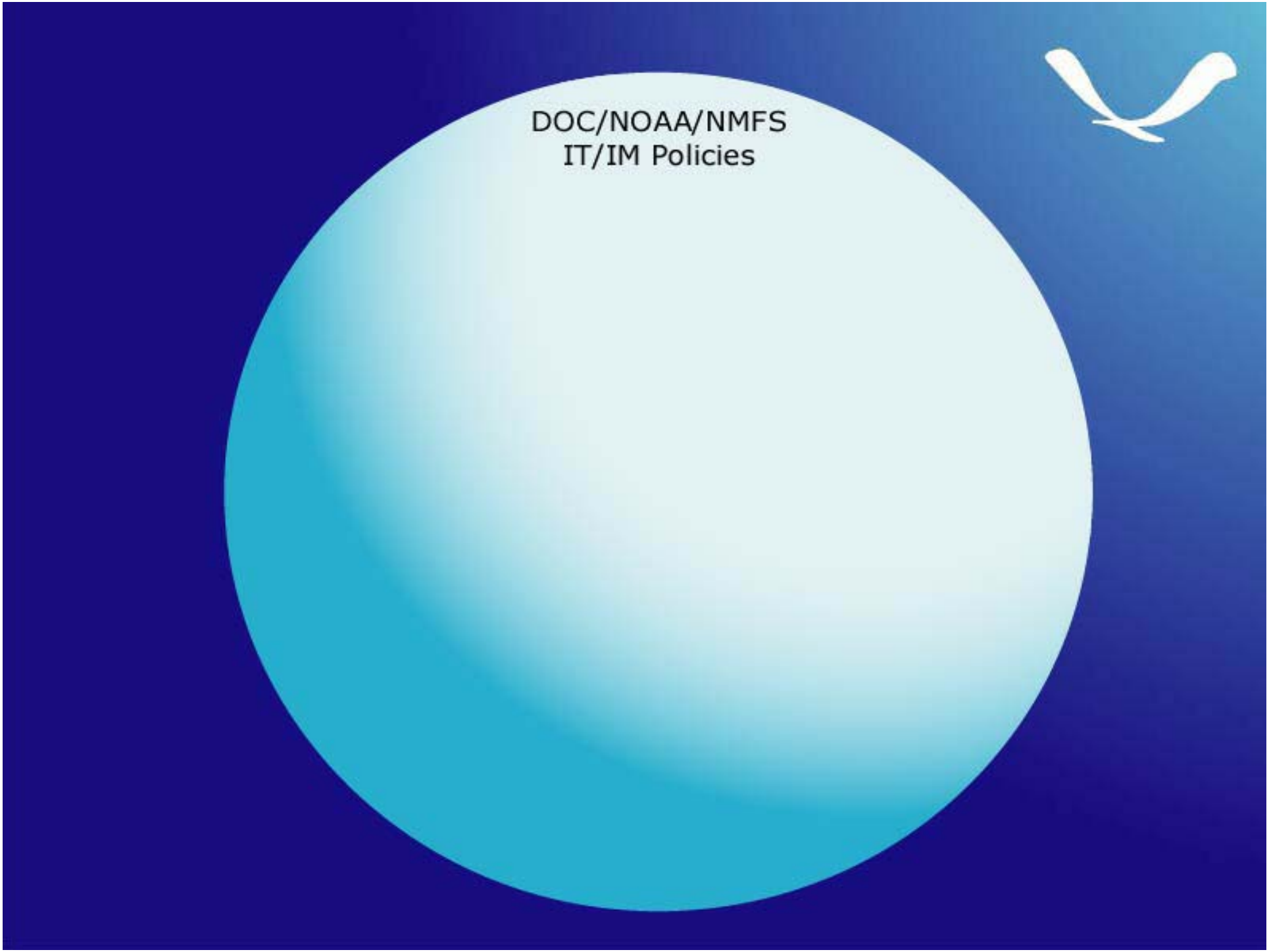

Data Management
User Support
Data Accessibility
Data Dissemination
Data Availability
Data Security
Data Integration
Data Publication

Data Management Areas



Who Is Responsible for Data Management?

All data role groups!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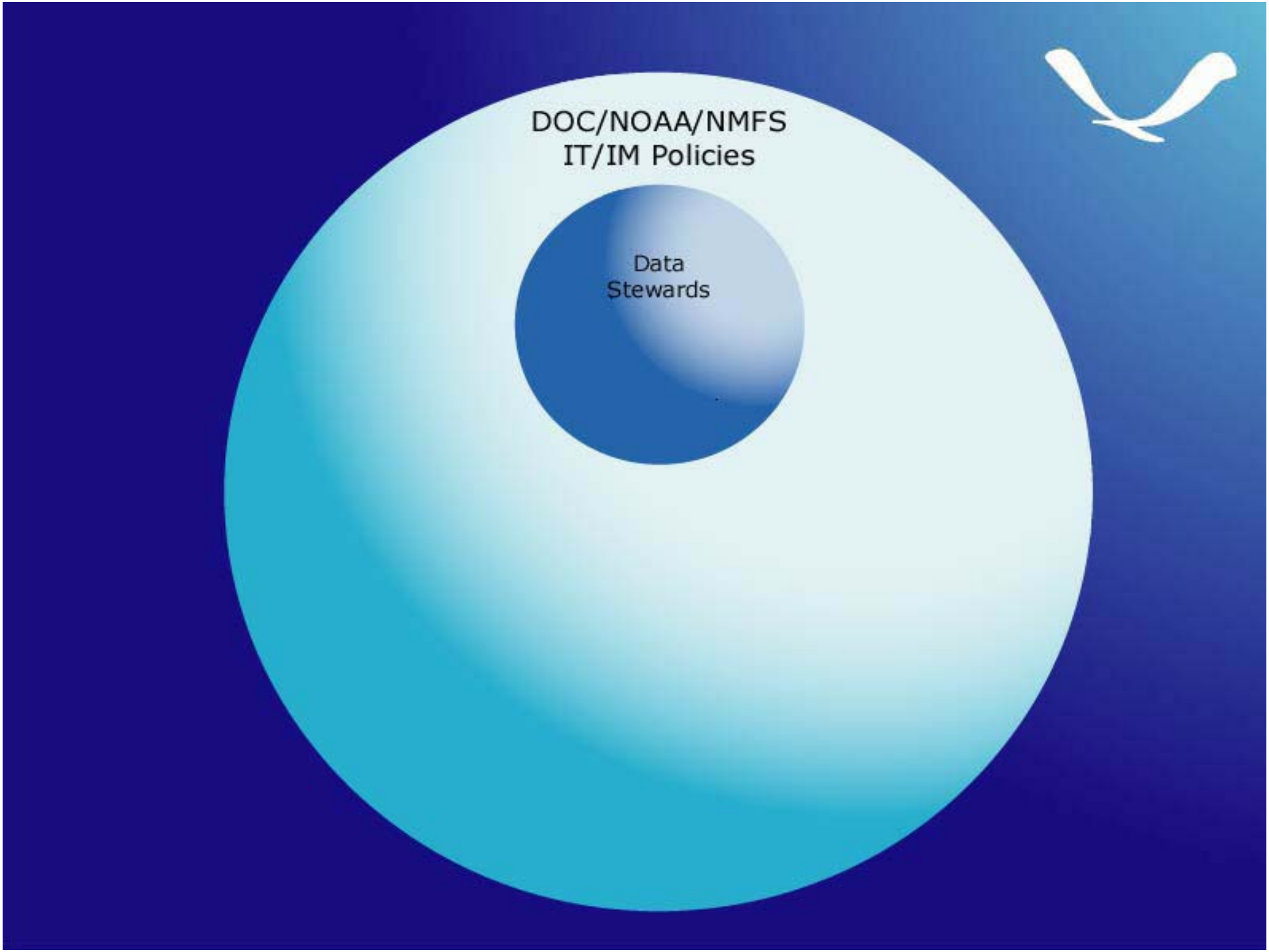
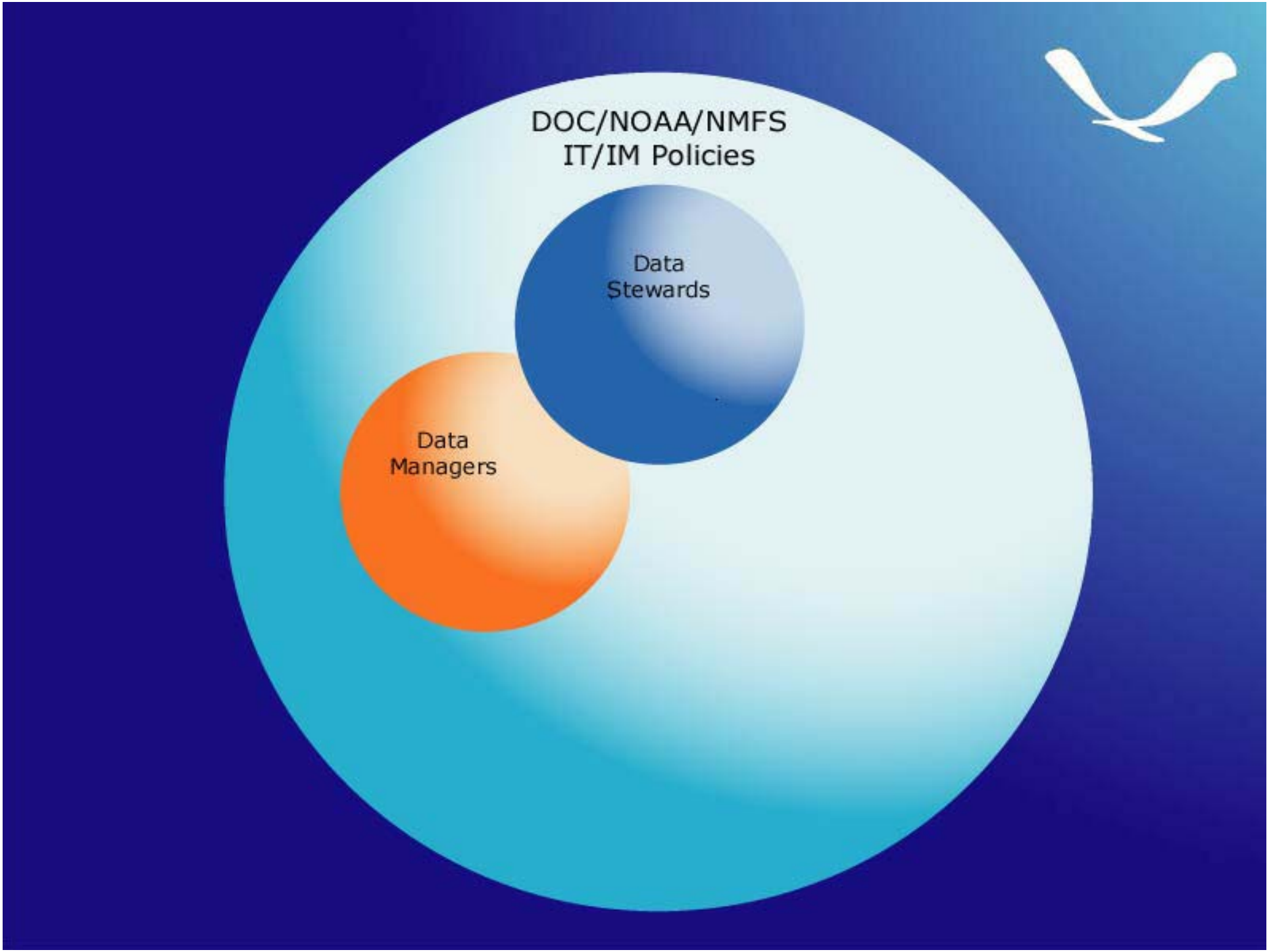
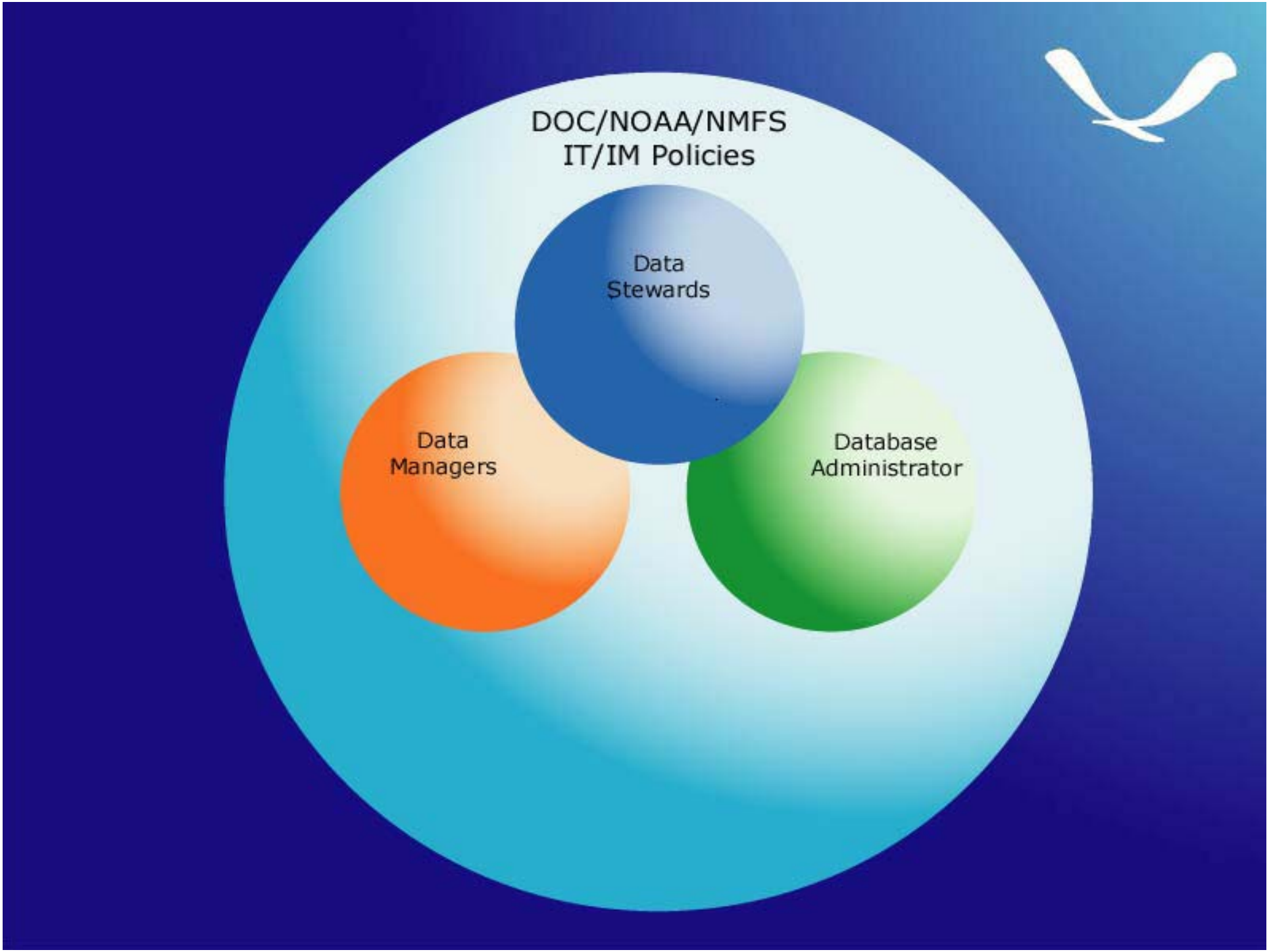
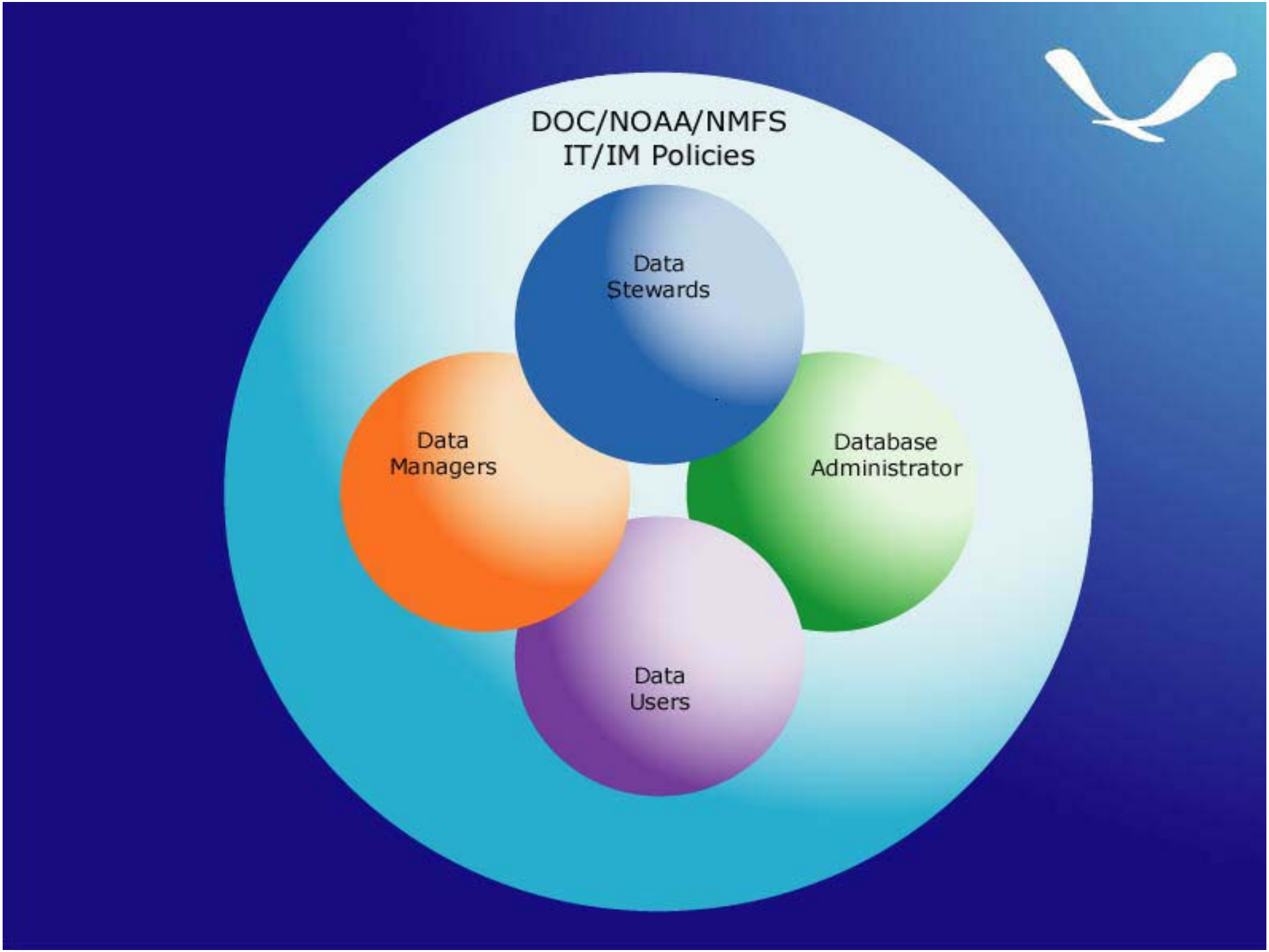
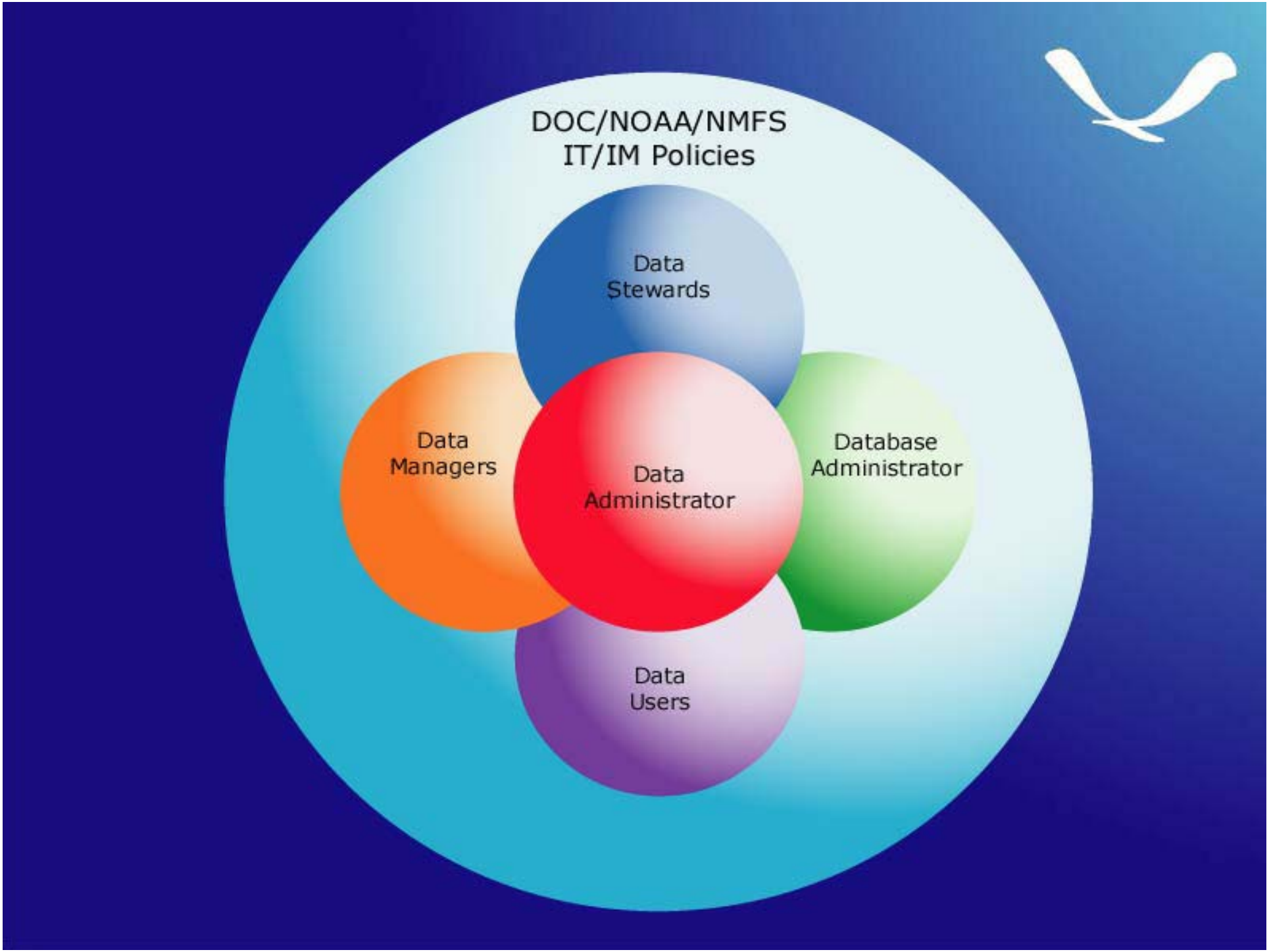
IT/IM Policies


DOC/NOAA/NMFS
IT/IM Policies
Data
Stewards


DOC/NOAA/NMFS
IT/IM Policies
Data
Stewards
Data
Managers


DOC/NOAA/NMFS
IT/IM Policies
Data
Stewards
Data
Managers
Database
Administrator


DOC/NOAA/NMFS
IT/IM Policies
Data
Stewards
Data
Managers
Database
Administrator
Data
Users


DOC/NOAA/NMFS
IT/IM Policies
Data
Stewards
Data
Managers
Data
Administrator
Database
Administrator
Data
Users

Our Mission…

Ensure access and dissemination of quality Fisheries data and metadata to appropriate users in a timely manner.

The Technical Team

Jan Pappas:

- PIFSC systems DBA
- Oracle Project Team member

Karen Sender:

- JIMAR contractor
- DBA/Computer Specialist for ITS Oracle Team
- Scientific Information Systems background

Our Ground Rules…

- Look for data management resources that already exist
- Commit to data quality and data transparency
- Develop reusable data management tools

Our Ground Rules …(cont.)

- Involve all the data role groups
- Adopt the data stewardship paradigm
- Design in process improvement schemes
- Minimize points-of-failure

Our Ground Rules …(cont.)

- Completely document every aspect of the data system
- Provide data management education at every opportunity
- Keep it simple
- Try the plan on an existing data system

Hawaii Longline Observer Program

- Collecting data since 1994
- 5-25% coverage of Hawaii Longline fishing trips
- Related data sets – Logbook, landings
- Post trip data entry by the observer in office

The Support Team

Stuart “Joe” Arceneaux:

- PIRO Observer Training Coordinator

Thomas Swenarton:

- PIRO Debriefer

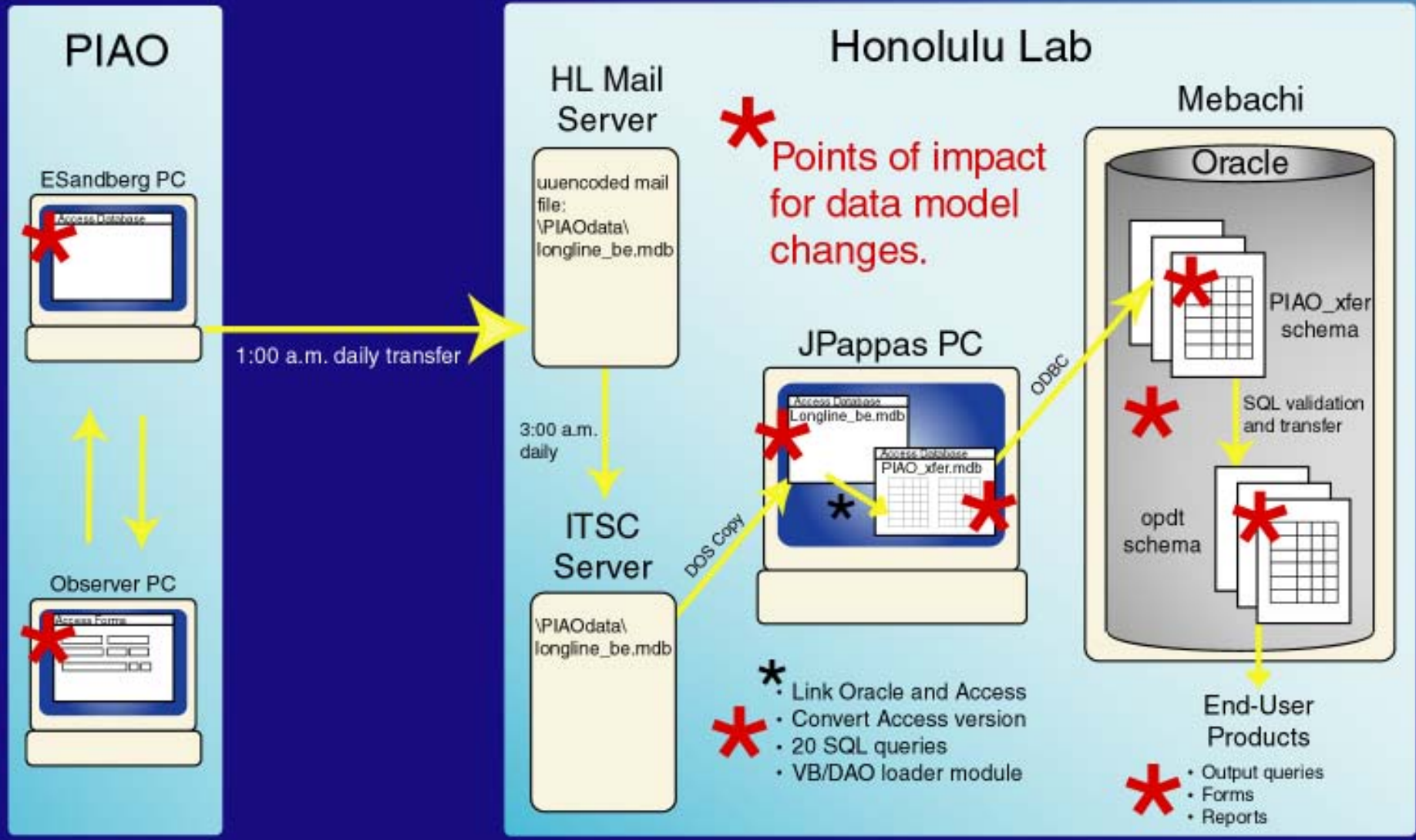
Tina Chang:

- FIS IT Coordinator/DBA
- NASDAQ and NASA Hubble systems development

Data Role Group Concerns of the Existing System

- End User complaints on data quality
- No clearly defined process for reporting/resolving data issues
- Database model deficiencies
- Excessive points-of-failure
- Data transfer arduous
- Labor intensive effort for any system modification
- Redundant and ambiguous data elements
- Burden on data collectors

Observer Electronic Data Flow



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Team Focus Areas

- Data Quality
- Ease of Use (collection and data entry)
- Data Management at the source (PIRO)
- Data Security
- System reliability and stability
- Data Harmony with national FIS objectives
- Compliance with NOAA Data Quality Act

Data Quality

- Document definitions for all data elements
- Develop Data Issues Management tool
- Develop and enforce change control procedures
- Track Data set history/activities
- Promote the Data Stewardship model

Ease of Use

- Use web based interface
- Design in data validation at data entry
- Develop user controlled data set validation scheme
- Secure web interface using database roles
- Design user friendly feedback and error messaging

Data Management at the Source

- Administration tools at PIRO to manage
  - reference codes
  - validation algorithms
  - users
  - database roles
  - Project circulars, activities log, news, FAQ

Data Security

- Each data entry person and debriefer to log on with own user name and password
- Database user roles to provide appropriate read, insert, update, and delete privileges
- History – who, when, what – for each database transaction to be maintained in the database
- Use NOAA FITS approved technologies

System Reliability

- Connection between PIRO and HL is through direct T1 line, independent of internet
- Reduction in number of points-of-failure
- Automated nightly backup of database

Harmony with National FIS

- Design to consider ACCSP(FIS) data structure and objectives
- Standardize field names and data types
- Manage metadata for all data elements in a data registry

NOAA Data Quality Act

- Requires a process for reporting/resolving errors
- Requirement for data transparency, quality, integrity, and utility
- Need for clearly defined data management practices

Accomplishments to Date

- Improved communication between data role groups
- Improved data quality and data utility
- Better data, happier users
- Additional data in the enterprise database
- Elimination of redundant data items
- Computer calculation replaces human calculations

Accomplishments (cont.): Data Model Enhancements

- Model design that ensures data stability and integrity
- Use of appropriate data types to facilitate summary calculations
- Data history tables track inserts, updates and deletes as well as who, when and what data was changed
- Reference code management allows code changes without model changes

Accomplishments (cont.): LODS Applications

- LODS Home
- Data Entry Application
- Data Element Registry
- Data Validation Manager
- Data Issues Manager
- Reference Code Management
- LODS Admin

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LODS Longline Observer Data System - Netscape 6

File Edit View Search Go Bookmarks Tasks Help

http://itsi.nmfs.hawaii.edu:7777/htdocs/lop/html/lods.html

NOAA Fisheries
Pacific Islands Region
Longline Observer Data System

Today is Friday, October 17, 2003

Date: 15 OCT 2003 04:10
To: LODS users
From: KSender, JPappas

Please check out the LODS FAQs (Frequently Asked Questions), now available online from the LODS home page. Lots of helpful hints for entering your data. New questions and answers are added as the need arises.

LODS
LODS FAQs
LODS News Archives
Codes
Manual
Forms
Resources
LOP Update Circulars
Data Issues
Validation List
Data Error Messages
Data Validation Manager
System Administration
Tech Support
LODS Trainer

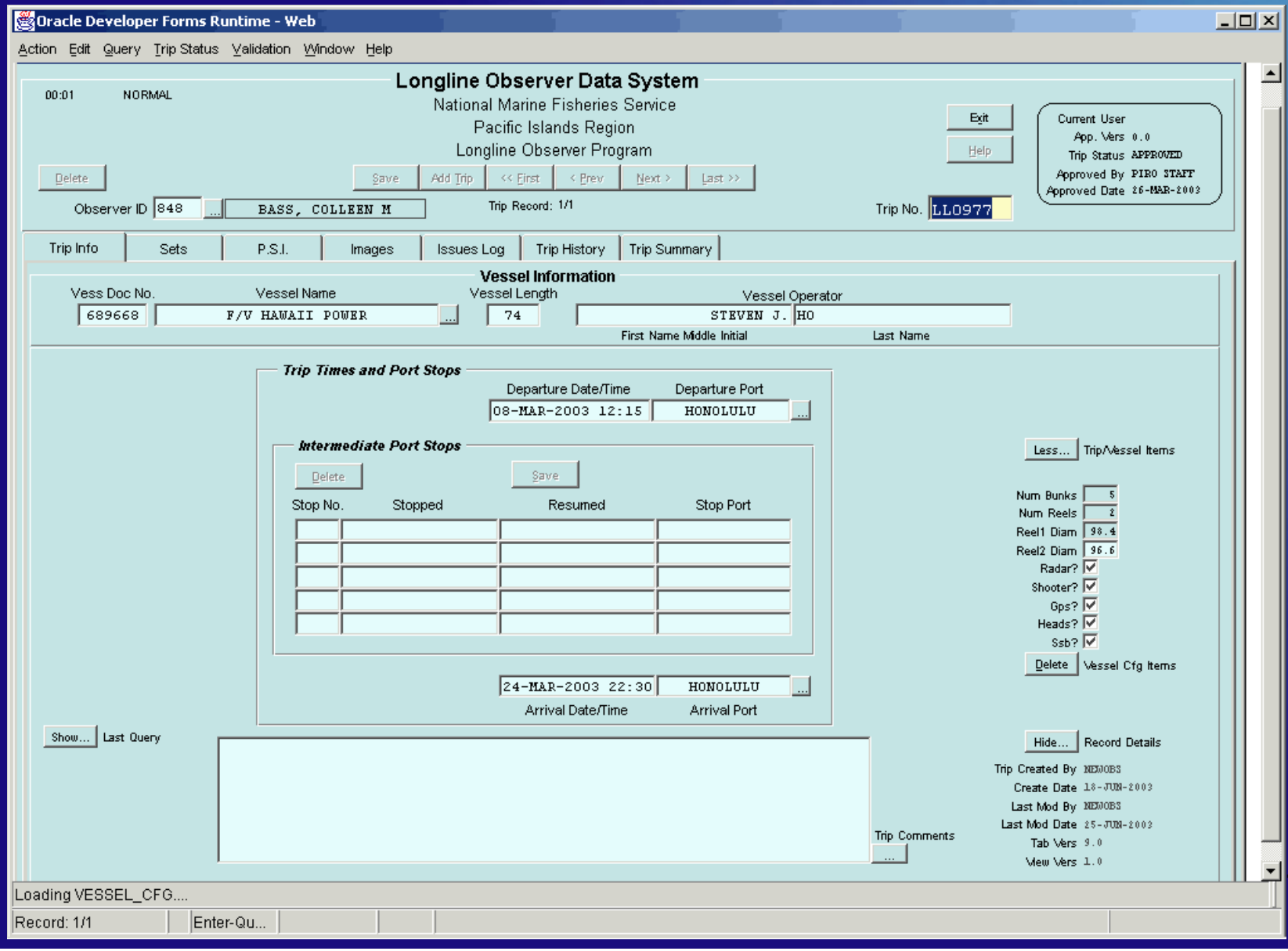
DOC | NOAA | PIRO | PIFSC | Privacy | Security
LODS Home | LODS Pub | LODS Admin
Last updated: Fri, 17 Oct 2003 22:51:44 GMT

Document: Done (0.453 secs)

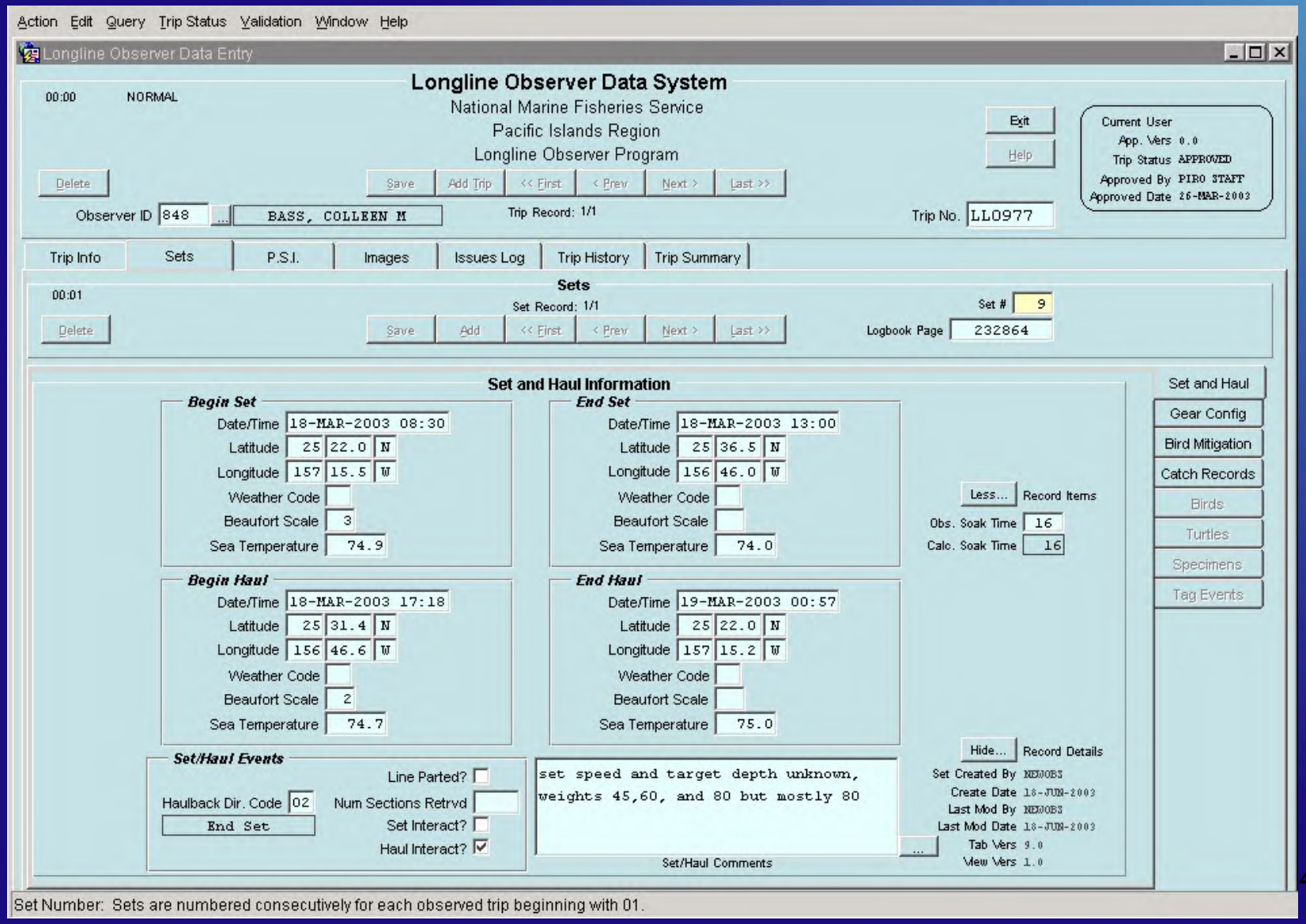
Accomplishments (cont.): LODS Applications

- LODS Home
- Data Entry Application
- Data Element Registry
- Data Validation Manager
- Data Issues Manager
- Reference Code Management
- LODS Admin

Trip Tab


Oracle Developer Forms Runtime - Web
Action Edit Query Trip Status Validation Window Help
Longline Observer Data System
National Marine Fisheries Service
Pacific Islands Region
Longline Observer Program
00:01 NORMAL
Exit
Help
Current User
App. Vers 0.0
Trip Status APPROVED
Approved By PIRO STAFF
Approved Date 26-MAR-2003
Delete
Save
Add Trip
<< First
< Prev
Next >
Last >>
Observer ID 848
BASS, COLLEEN M
Trip Record: 1/1
Trip No. LL0977
Trip Info
Sets
P.S.I.
Images
Issues Log
Trip History
Trip Summary
Vessel Information
Vess Doc No.
Vessel Name
Vessel Length
Vessel Operator
689668
F/V HAWAII POWER
74
STEVEN J.
HO
First Name Middle Initial
Last Name
Trip Times and Port Stops
Departure Date/Time
Departure Port
08-MAR-2003 12:15
HONOLULU
Intermediate Port Stops
Delete
Save
Stop No.
Stopped
Resumed
Stop Port
24-MAR-2003 22:30
HONOLULU
Arrival Date/Time
Arrival Port
Less...
Trip/Vessel Items
Num Bunks 5
Num Reels 2
Reel1 Diam 98.4
Reel2 Diam 96.6
Radar?
Shooter?
Gps?
Heads?
Ssb?
Delete
Vessel Cfg Items
Show...
Last Query
Trip Comments
Hide...
Record Details
Trip Created By MEWOBS
Create Date 18-JUN-2003
Last Mod By MEWOBS
Last Mod Date 25-JUN-2003
Tab Vers 9.0
Mew Vers 1.0
Loading VESSEL_CFG....
Record: 1/1
Enter-Qu...

Set Tab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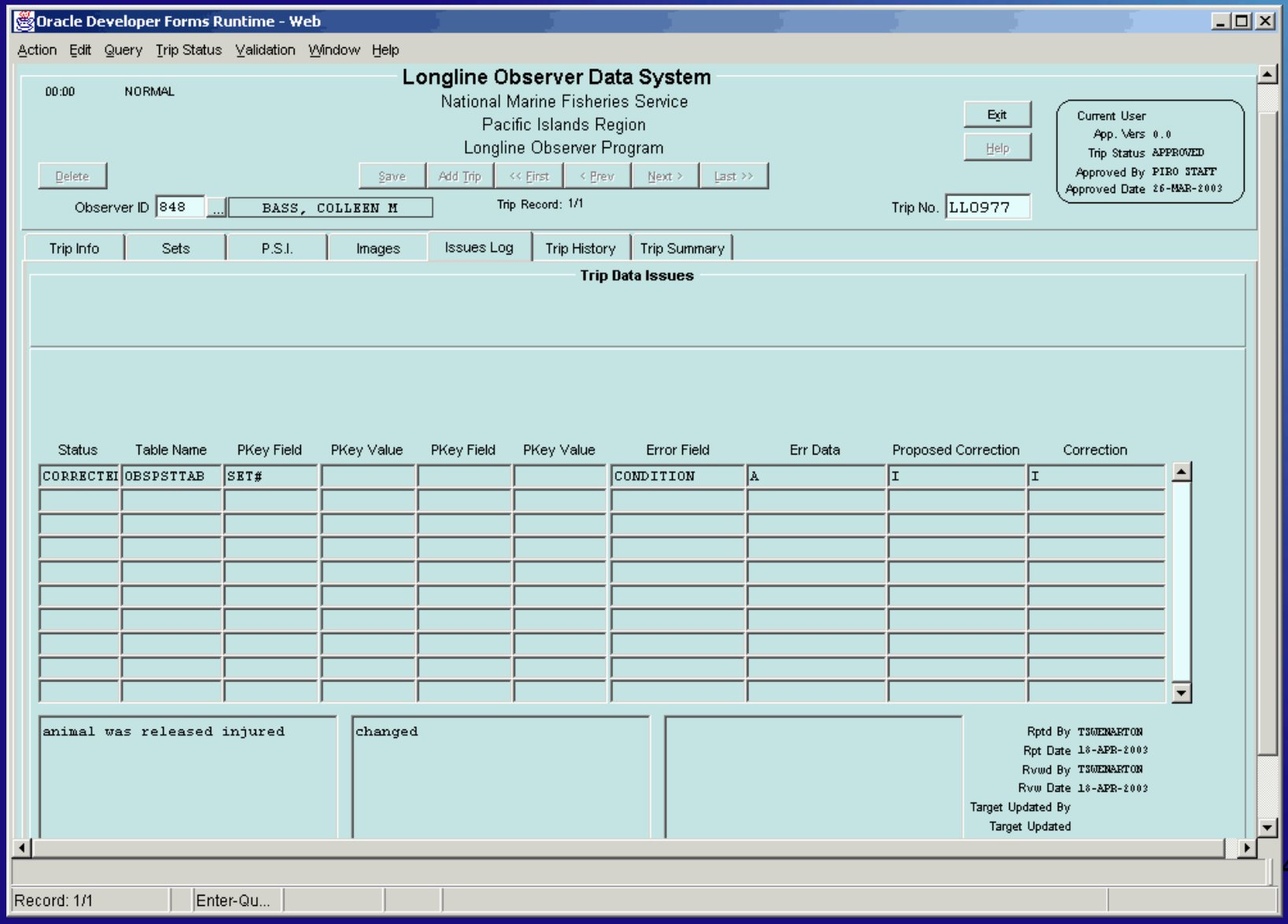
Images
Issues Log
Trip History
Trip Summary
Sets
00:01
Set Record: 1/1
Delete
Save
Add
<< First
< Prev
Next >
Last >>
Set # 9
Logbook Page 232864
Set and Haul Information
Begin Set
Date/Time 18-MAR-2003 08:30
Latitude 25 22.0 N
Longitude 157 15.5 W
Weather Code
Beaufort Scale 3
Sea Temperature 74.9
End Set
Date/Time 18-MAR-2003 13:00
Latitude 25 36.5 N
Longitude 156 46.0 W
Weather Code
Beaufort Scale
Sea Temperature 74.0
Begin Haul
Date/Time 18-MAR-2003 17:18
Latitude 25 31.4 N
Longitude 156 46.6 W
Weather Code
Beaufort Scale 2
Sea Temperature 74.7
End Haul
Date/Time 19-MAR-2003 00:57
Latitude 25 22.0 N
Longitude 157 15.2 W
Weather Code
Beaufort Scale
Sea Temperature 75.0
Less... Record Items
Obs. Soak Time 16
Calc. Soak Time 16
Set and Haul
Gear Config
Bird Mitigation
Catch Records
Birds
Turtles
Specimens
Tag Events
Set/Haul Events
Line Parted?
Haulback Dir. Code 02
Num Sections Retrvd
End Set
Set Interact?
Haul Interact?
set speed and target depth unknown, weights 45,60, and 80 but mostly 80
Set/Haul Comments
Hide... Record Details
Set Created By NEWOBS
Create Date 18-JUN-2003
Last Mod By NEWOBS
Last Mod Date 18-JUN-2003
Tab Vers 9.0
View Vers 1.0
Set Number: Sets are numbered consecutively for each observed trip beginning with 01.

Issues Tab


Oracle Developer Forms Runtime - Web
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Current User
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Trip Status APPROVED
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Add Trip
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Trip Record: 1/1
Trip No. LL0977
Trip Info
Sets
P.S.I.
Images
Issues Log
Trip History
Trip Summary
Trip Data Issues
Status
Table Name
PKey Field
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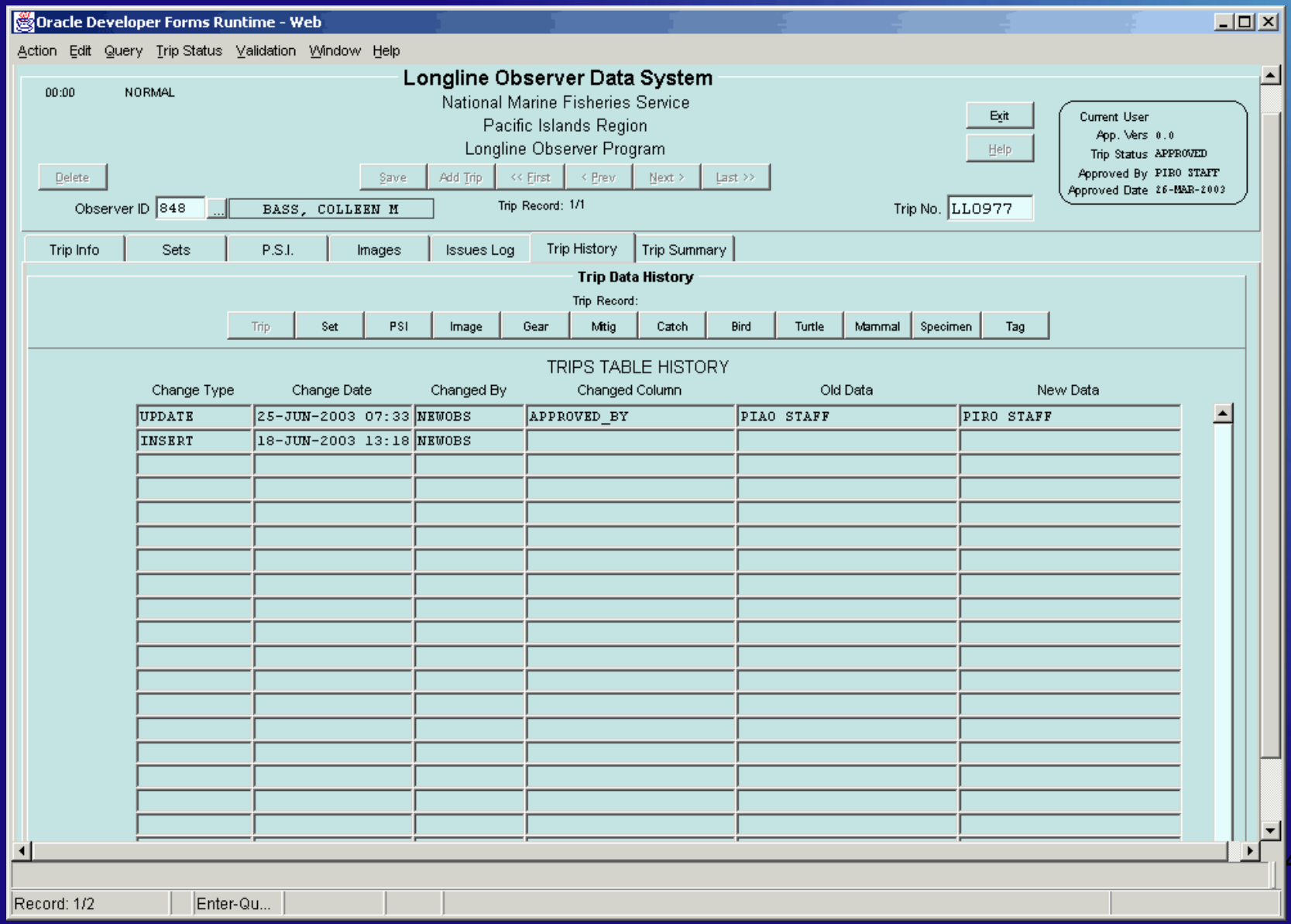
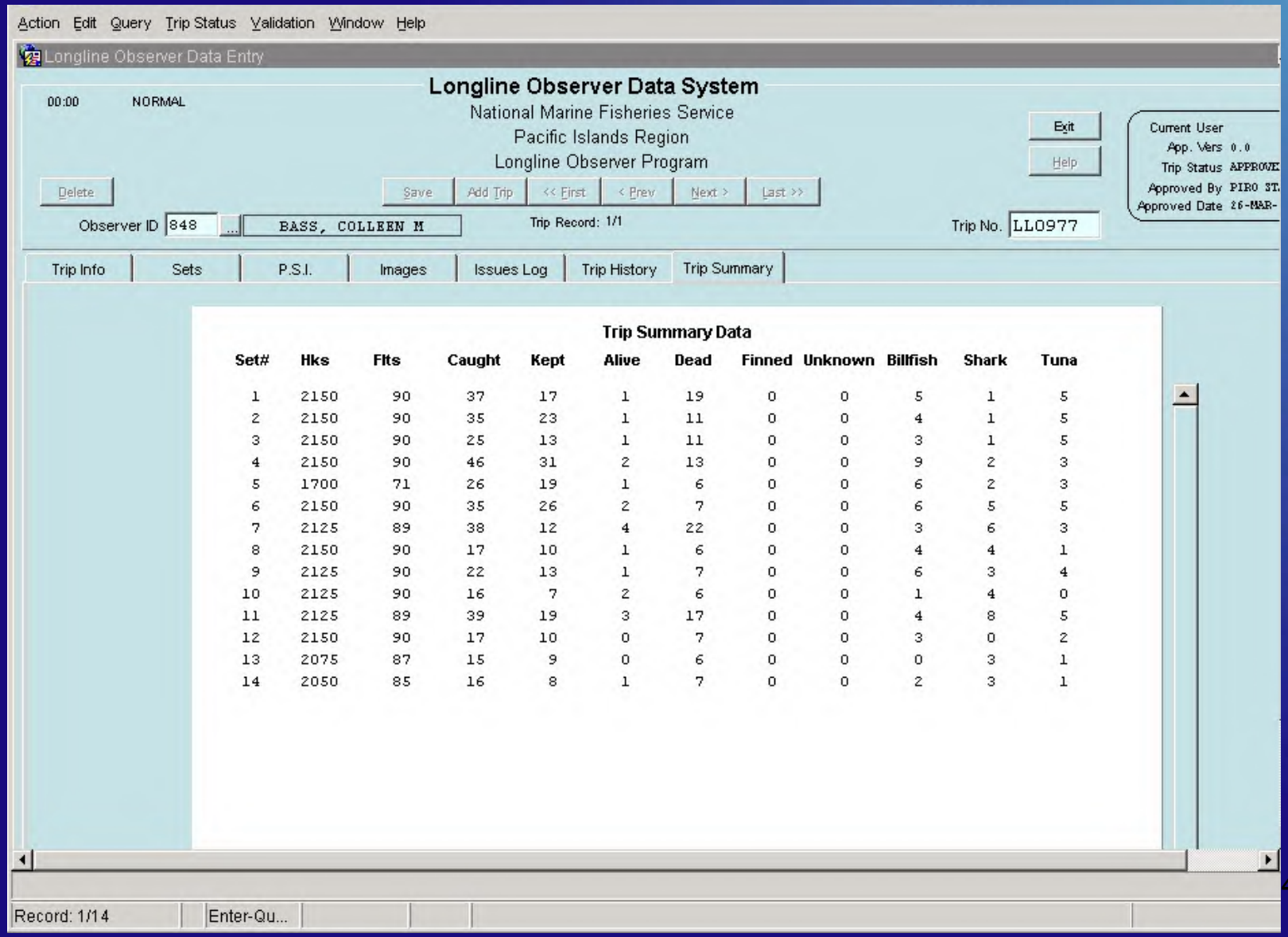
PKey Value
Error Field
Err Data
Proposed Correction
Correction
CORRECTEI
OBSPSTTAB
SET#
CONDITION
A
I
I
animal was released injured
changed
Rptd By TSWENARTON
Rpt Date 18-APR-2003
Rvwd By TSWENARTON
Rvw Date 18-APR-2003
Target Updated By
Target Updated
Record: 1/1
Enter-Qu...

Trip Data History Tab

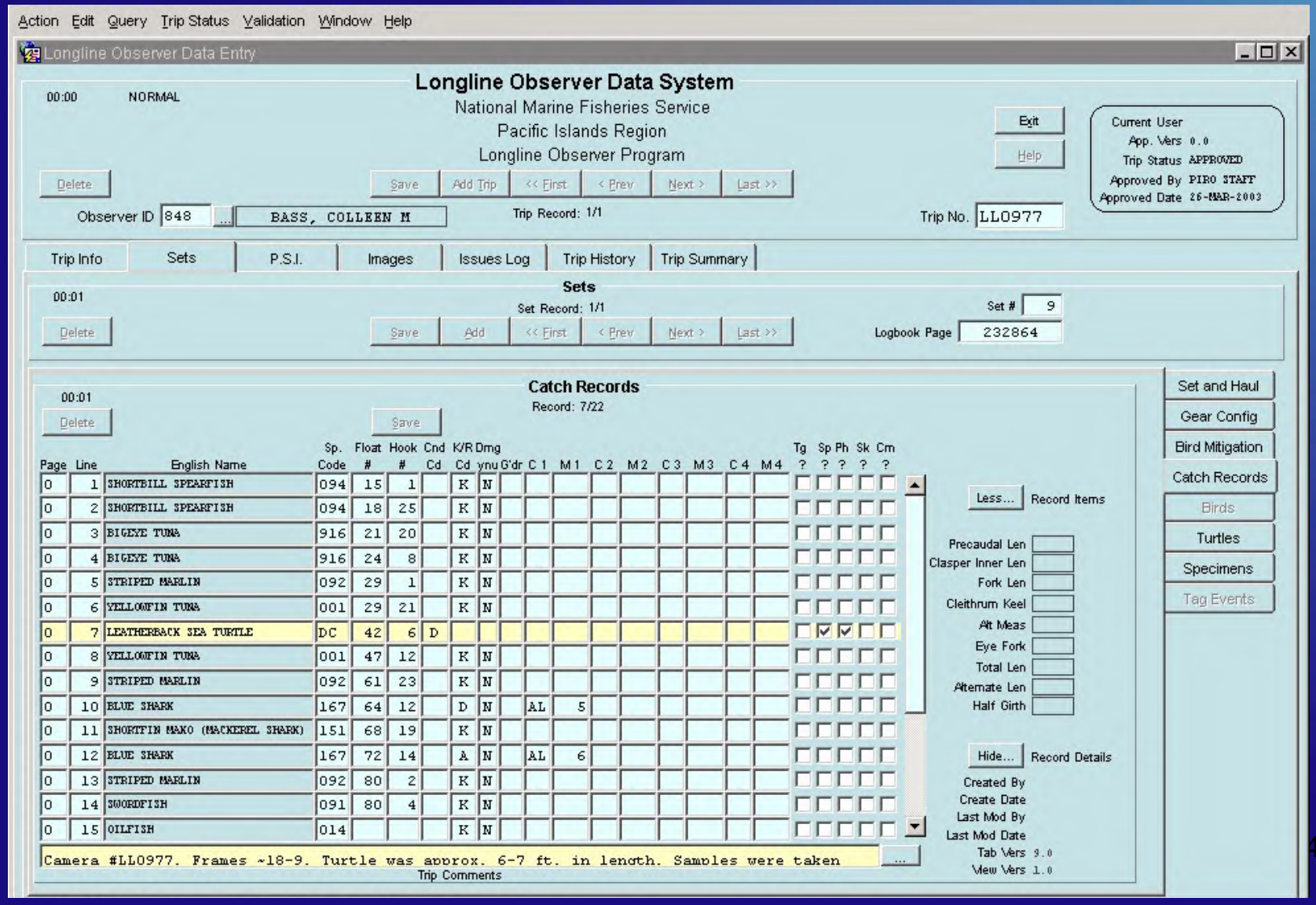


Trip Summary Tab



Set#	Hks	Flts	Caught	Kept	Alive	Dead	Finned	Unknown	Billfish	Shark	Tuna
1	2150	90	37	17	1	19	0	0	5	1	5
2	2150	90	35	23	1	11	0	0	4	1	5
3	2150	90	25	13	1	11	0	0	3	1	5
4	2150	90	46	31	2	13	0	0	9	2	3
5	1700	71	26	19	1	6	0	0	6	2	3
6	2150	90	35	26	2	7	0	0	6	5	5
7	2125	89	38	12	4	22	0	0	3	6	3
8	2150	90	17	10	1	6	0	0	4	4	1
9	2125	90	22	13	1	7	0	0	6	3	4
10	2125	90	16	7	2	6	0	0	1	4	0
11	2125	89	39	19	3	17	0	0	4	8	5
12	2150	90	17	10	0	7	0	0	3	0	2
13	2075	87	15	9	0	6	0	0	0	3	1
14	2050	85	16	8	1	7	0	0	2	3	1

Catch Tab


Action Edit Query Trip Status Validation Window Help
Longline Observer Data Entry
Longline Observer Data System
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00:00 NORMAL
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Current User
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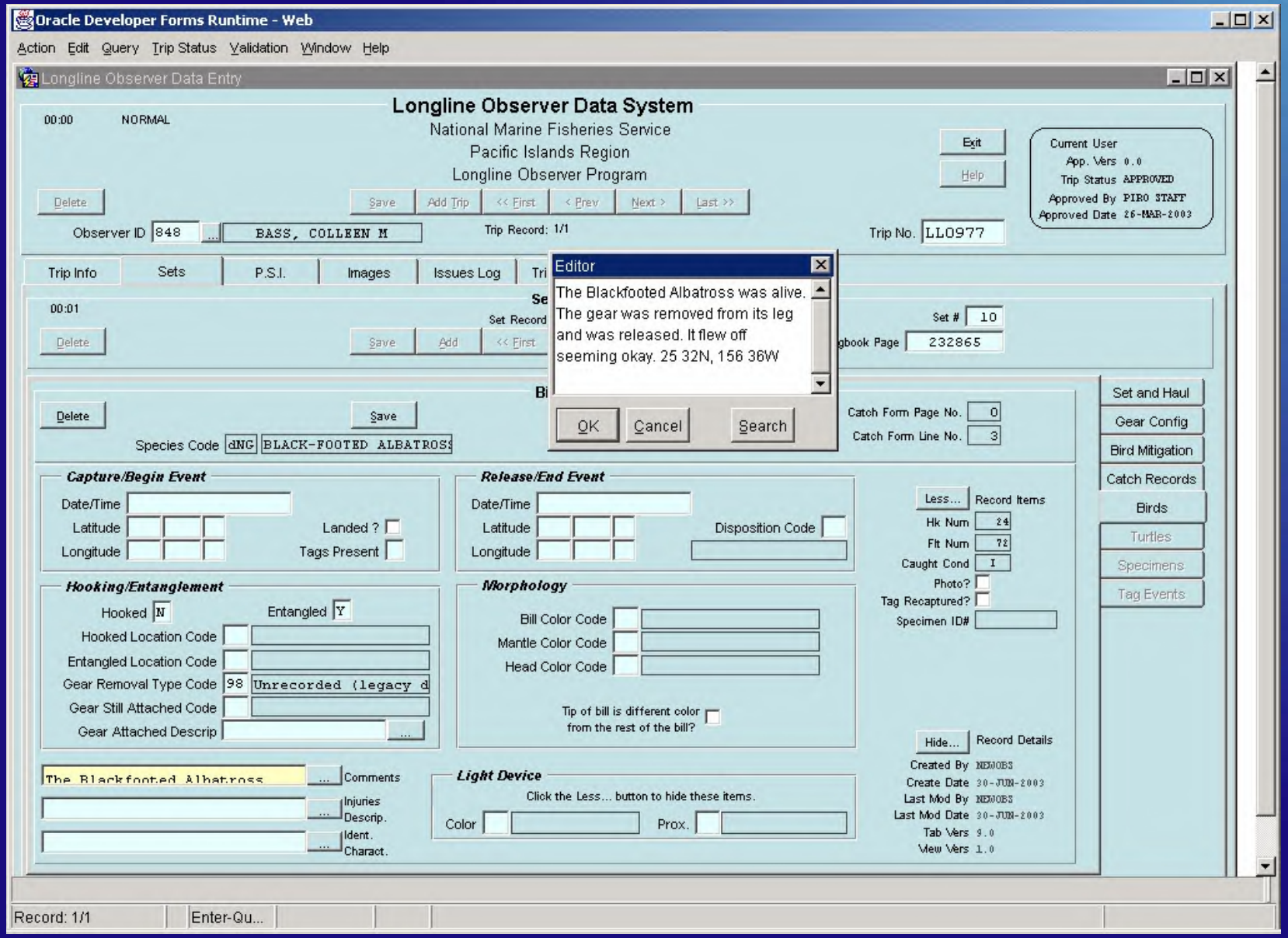
P.S.I.
Images
Issues Log
Trip History
Trip Summary
Sets
00:01
Set Record: 1/1
Set # 9
Logbook Page 232864
Catch Records
Record: 7/22
Page Line English Name Sp. Code Float # Hook # Cnd Cd K/R Cd Dmg ynu G'dr C 1 M 1 C 2 M 2 C 3 M 3 C 4 M 4 Tg ? Sp ? Ph ? Sk ? Cm ?
0 1 SHORTBILL SPEARFISH 094 15 1 K N
0 2 SHORTBILL SPEARFISH 094 18 25 K N
0 3 BIGEYE TUNA 916 21 20 K N
0 4 BIGEYE TUNA 916 24 8 K N
0 5 STRIPED MARLIN 092 29 1 K N
0 6 YELLOWFIN TUNA 001 29 21 K N
0 7 LEATHERBACK SEA TURTLE DC 42 6 D
0 8 YELLOWFIN TUNA 001 47 12 K N
0 9 STRIPED MARLIN 092 61 23 K N
0 10 BLUE SHARK 167 64 12 D N AL 5
0 11 SHORTFIN MAKO (MACKEREL SHARK) 151 68 19 K N
0 12 BLUE SHARK 167 72 14 A N AL 6
0 13 STRIPED MARLIN 092 80 2 K N
0 14 SWORDFISH 091 80 4 K N
0 15 OILFISH 014 K N
Camera #LL0977. Frames ~18-9. Turtle was approx. 6-7 ft. in length. Samples were taken
Trip Comments
Set and Haul
Gear Config
Bird Mitigation
Catch Records
Birds
Turtles
Specimens
Tag Events
Less... Record Items
Precaudal Len
Clasper Inner Len
Fork Len
Cleithrum Keel
Alt Meas
Eye Fork
Total Len
Alternate Len
Half Girth
Hide... Record Details
Created By
Create Date
Last Mod By
Last Mod Date
Tab Vers 9.0
View Vers 1.0

Birds Tab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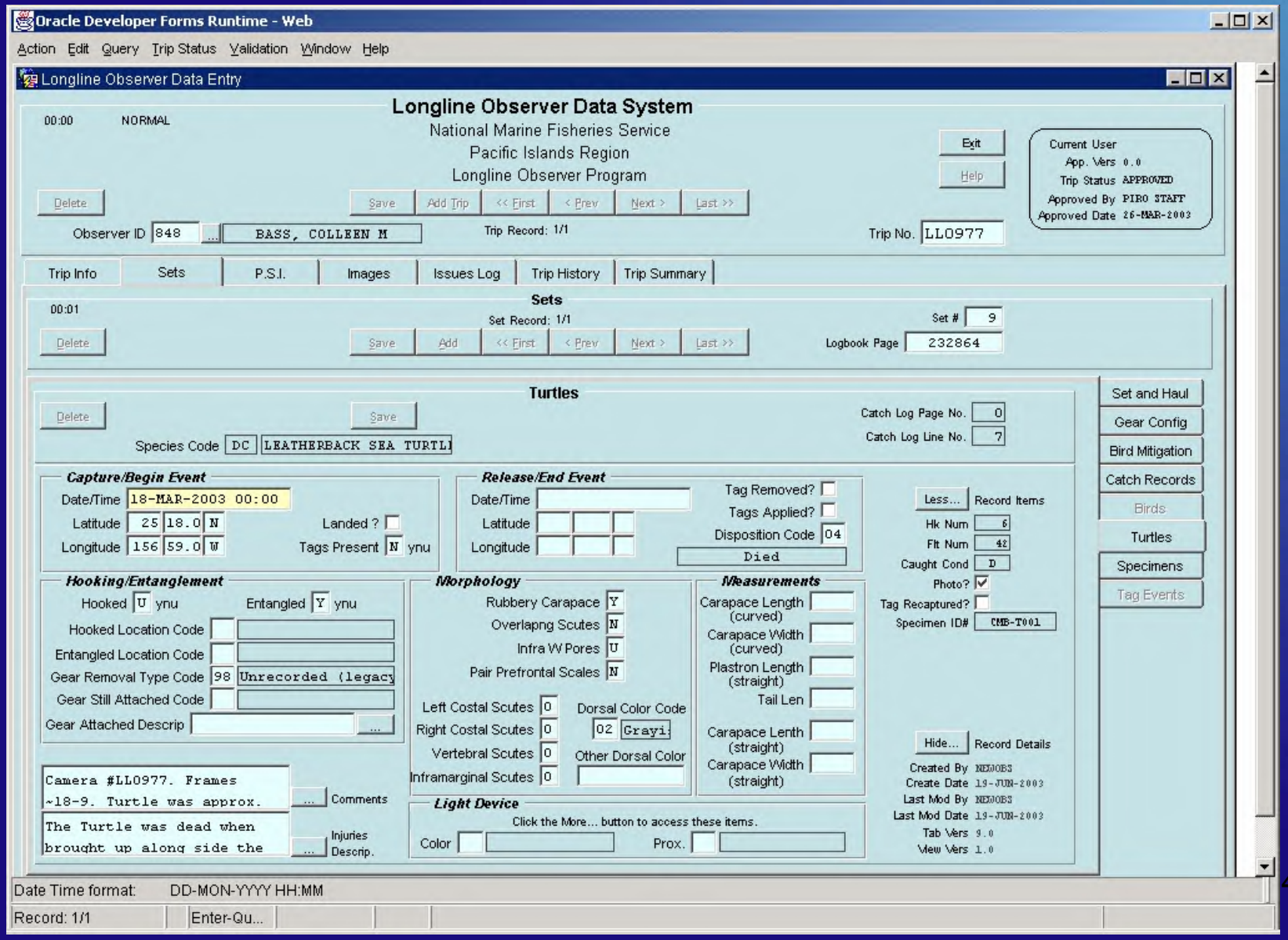
Trip Record: 1/1
Trip No. LL0977
Trip Info
Sets
P.S.I.
Images
Issues Log
Editor
The Blackfooted Albatross was alive. The gear was removed from its leg and was released. It flew off seeming okay. 25 32N, 156 36W
OK
Cancel
Search
00:01
Set Record
Set # 10
232865
Species Code dNG BLACK-FOOTED ALBATROSS
Catch Form Page No. 0
Catch Form Line No. 3
Set and Haul
Gear Config
Bird Mitigation
Catch Records
Birds
Turtles
Specimens
Tag Events
Capture/Begin Event
Date/Time
Latitude
Longitude
Landed ?
Tags Present
Release/End Event
Date/Time
Latitude
Longitude
Disposition Code
Less...
Record Items
Hk Num 24
Flt Num 72
Caught Cond I
Photo?
Tag Recaptured?
Specimen ID#
Hooking/Entanglement
Hooked N
Entangled Y
Hooked Location Code
Entangled Location Code
Gear Removal Type Code 98 Unrecorded (legacy d
Gear Still Attached Code
Gear Attached Descrip
Morphology
Bill Color Code
Mantle Color Code
Head Color Code
Tip of bill is different color from the rest of the bill?
Hide...
Record Details
Created By NEWOBS
Create Date 30-JUN-2003
Last Mod By NEWOBS
Last Mod Date 30-JUN-2003
Tab Vers 9.0
View Vers 1.0
The Blackfooted Albatross
Comments
Injuries
Descrip.
Ident.
Charact.
Light Device
Click the Less... button to hide these items.
Color
Prox.
Record: 1/1
Enter-Qu...

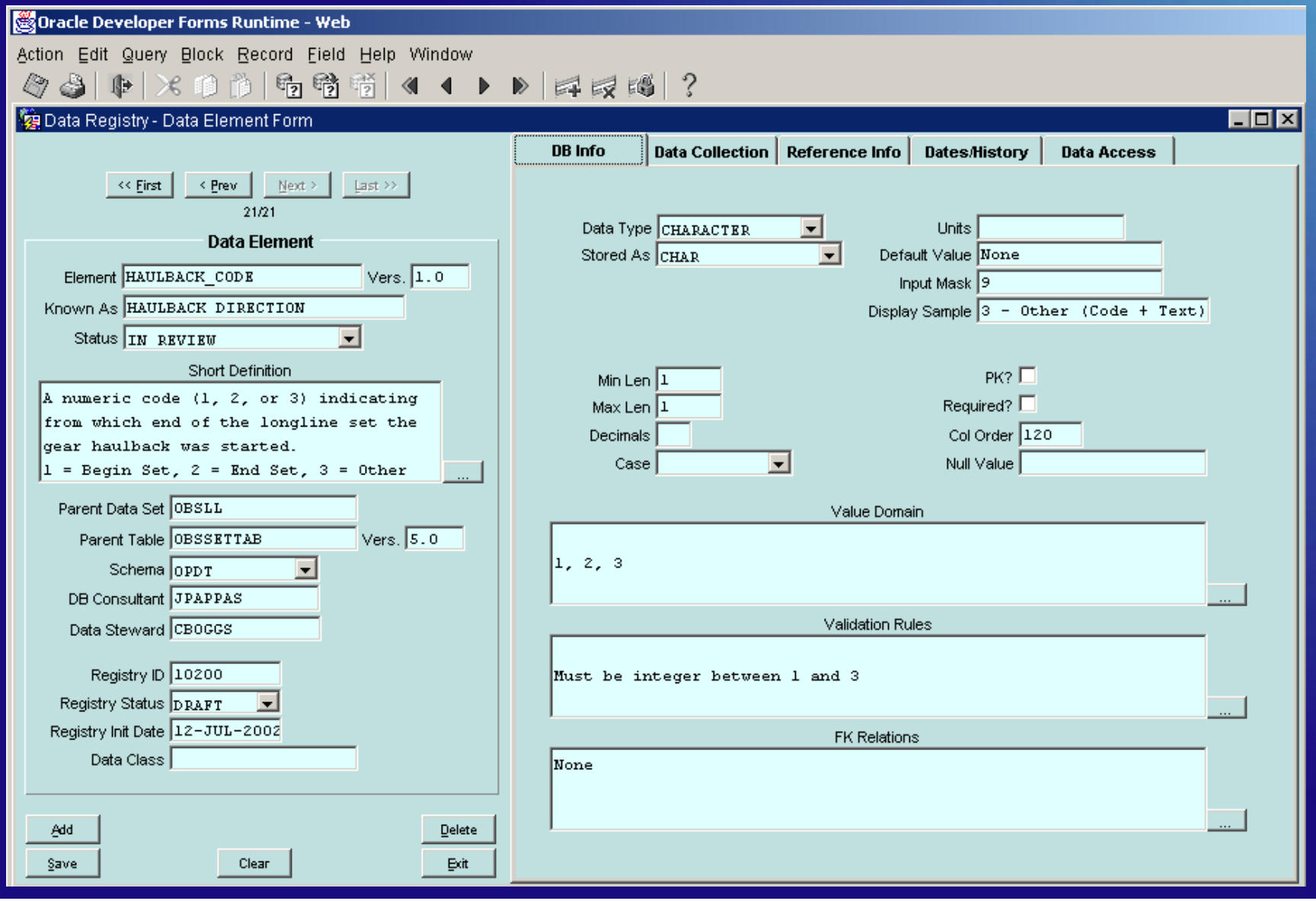
Turtles Tab


Oracle Developer Forms Runtime - Web
Action Edit Query Trip Status Validation Window Help
Longline Observer Data Entry
Longline Observer Data System
National Marine Fisheries Service
Pacific Islands Region
Longline Observer Program
00:00 NORMAL
Exit
Help
Current User
App. Vers 0.0
Trip Status APPROVED
Approved By PIRO STAFF
Approved Date 26-MAR-2003
Delete
Save
Add Trip
<< First
< Prev
Next >
Last >>
Observer ID 848
BASS, COLLEEN M
Trip Record: 1/1
Trip No. LL0977
Trip Info
Sets
P.S.I.
Images
Issues Log
Trip History
Trip Summary
Sets
00:01
Set Record: 1/1
Delete
Save
Add
<< First
< Prev
Next >
Last >>
Set # 9
Logbook Page 232864
Turtles
Delete
Save
Species Code DC LEATHERBACK SEA TURTLE
Catch Log Page No. 0
Catch Log Line No. 7
Capture/Begin Event
Date/Time 18-MAR-2003 00:00
Latitude 25 18.0 N
Longitude 156 59.0 W
Landed ?
Tags Present N ynu
Release/End Event
Date/Time
Latitude
Longitude
Tag Removed?
Tags Applied?
Disposition Code 04
Died
Less... Record Items
Hk Num 6
Flt Num 42
Caught Cond D
Photo?
Tag Recaptured?
Specimen ID# CMB-T001
Hooking/Entanglement
Hooked U ynu
Entangled Y ynu
Hooked Location Code
Entangled Location Code
Gear Removal Type Code 98 Unrecorded (legacy
Gear Still Attached Code
Gear Attached Descrip
Morphology
Rubbery Carapace Y
Overlapng Scutes N
Infra W Pores U
Pair Prefrontal Scales N
Left Costal Scutes 0
Right Costal Scutes 0
Vertebral Scutes 0
Inframarginal Scutes 0
Dorsal Color Code 02 Grayi
Other Dorsal Color
Measurements
Carapace Length (curved)
Carapace Width (curved)
Plastron Length (straight)
Tail Len
Carapace Lenth (straight)
Carapace Width (straight)
Camera #LL0977. Frames ~18-9. Turtle was approx.
Comments
The Turtle was dead when brought up along side the
Injuries Descrip.
Light Device
Click the More... button to access these items.
Color
Prox.
Hide... Record Details
Created By NEWOBS
Create Date 19-JUN-2003
Last Mod By NEWOBS
Last Mod Date 19-JUN-2003
Tab Vers 9.0
View Vers 1.0
Set and Haul
Gear Config
Bird Mitigation
Catch Records
Birds
Turtles
Specimens
Tag Events
Date Time format: DD-MON-YYYY HH:MM
Record: 1/1
Enter-Qu...

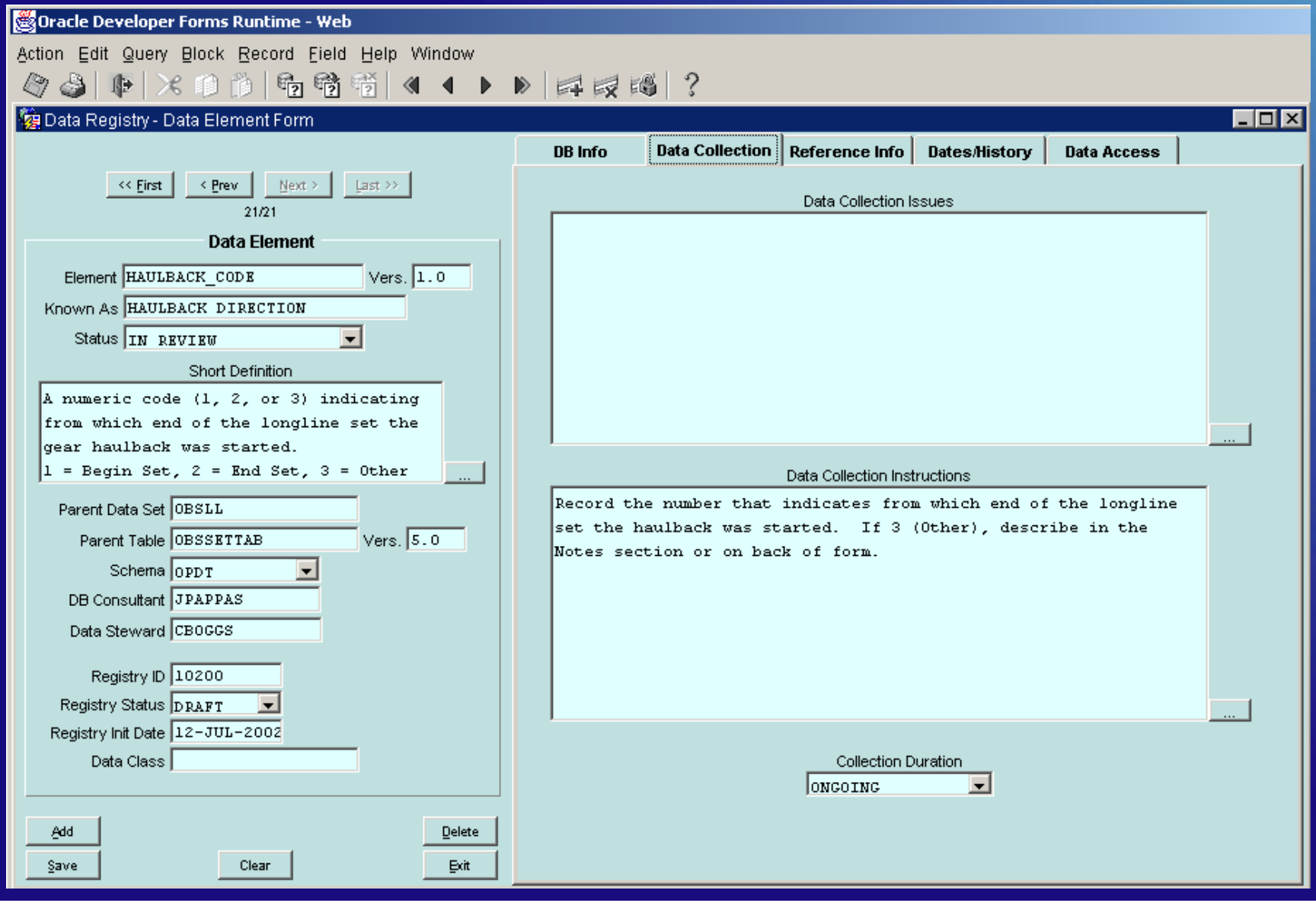
Accomplishments (cont.): LODS Applications

- LODS Home
- Data Entry Application
- Data Element Registry
- Data Validation Manager
- Data Issues Manager
- Reference Code Management
- LODS Admin

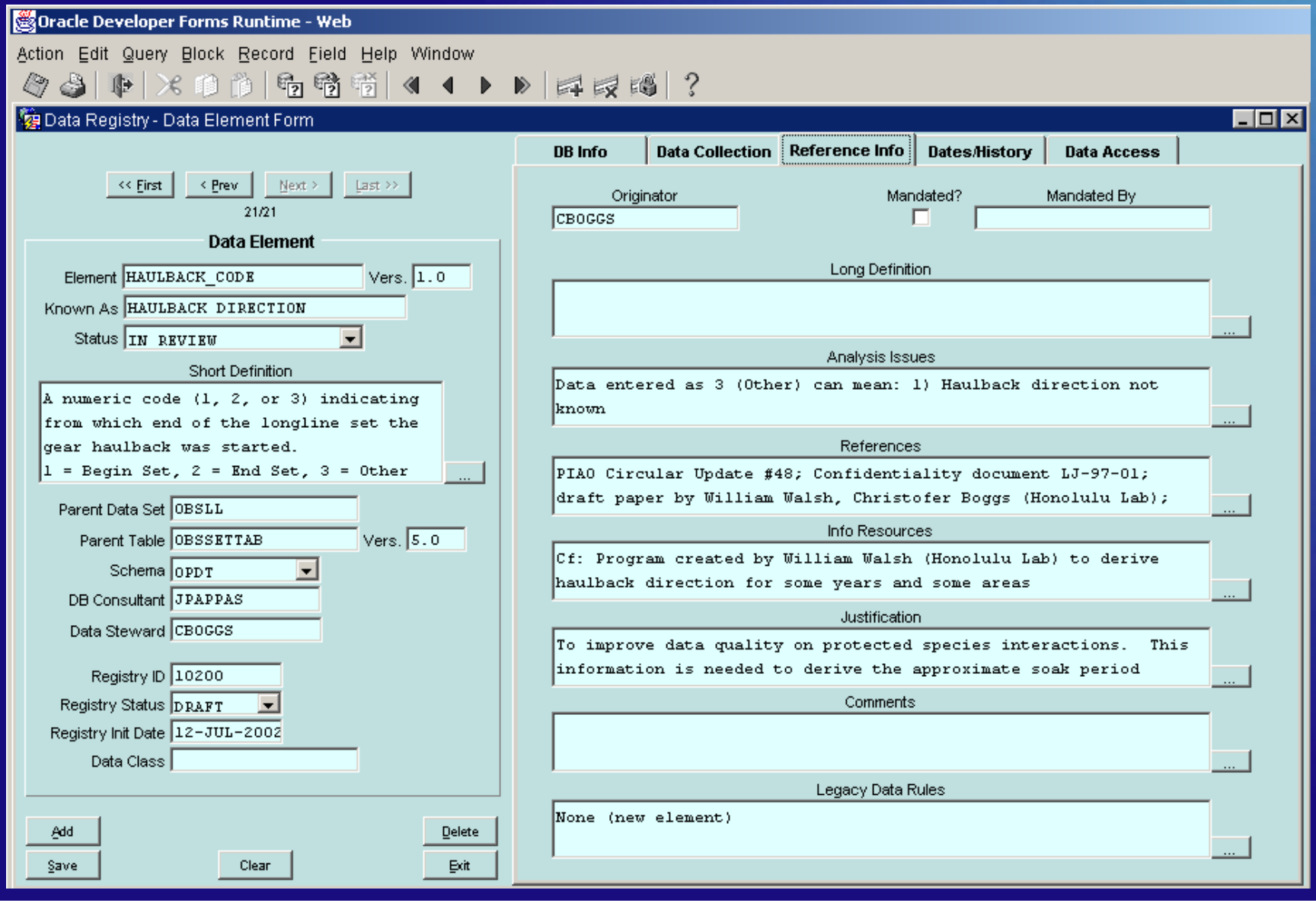
Data Element Registry
Database Information Tab



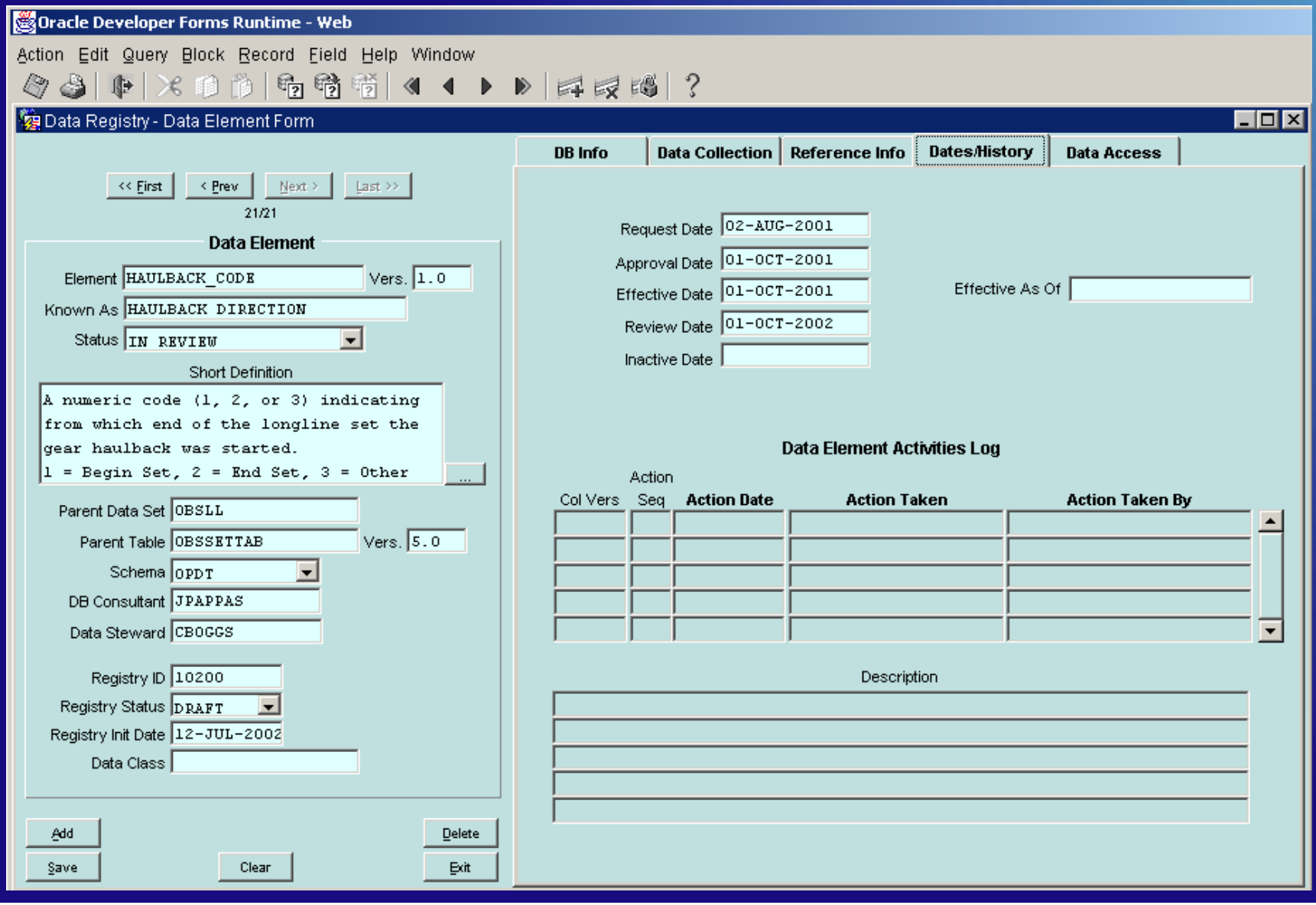
Data Element Registry
Data Collection Tab



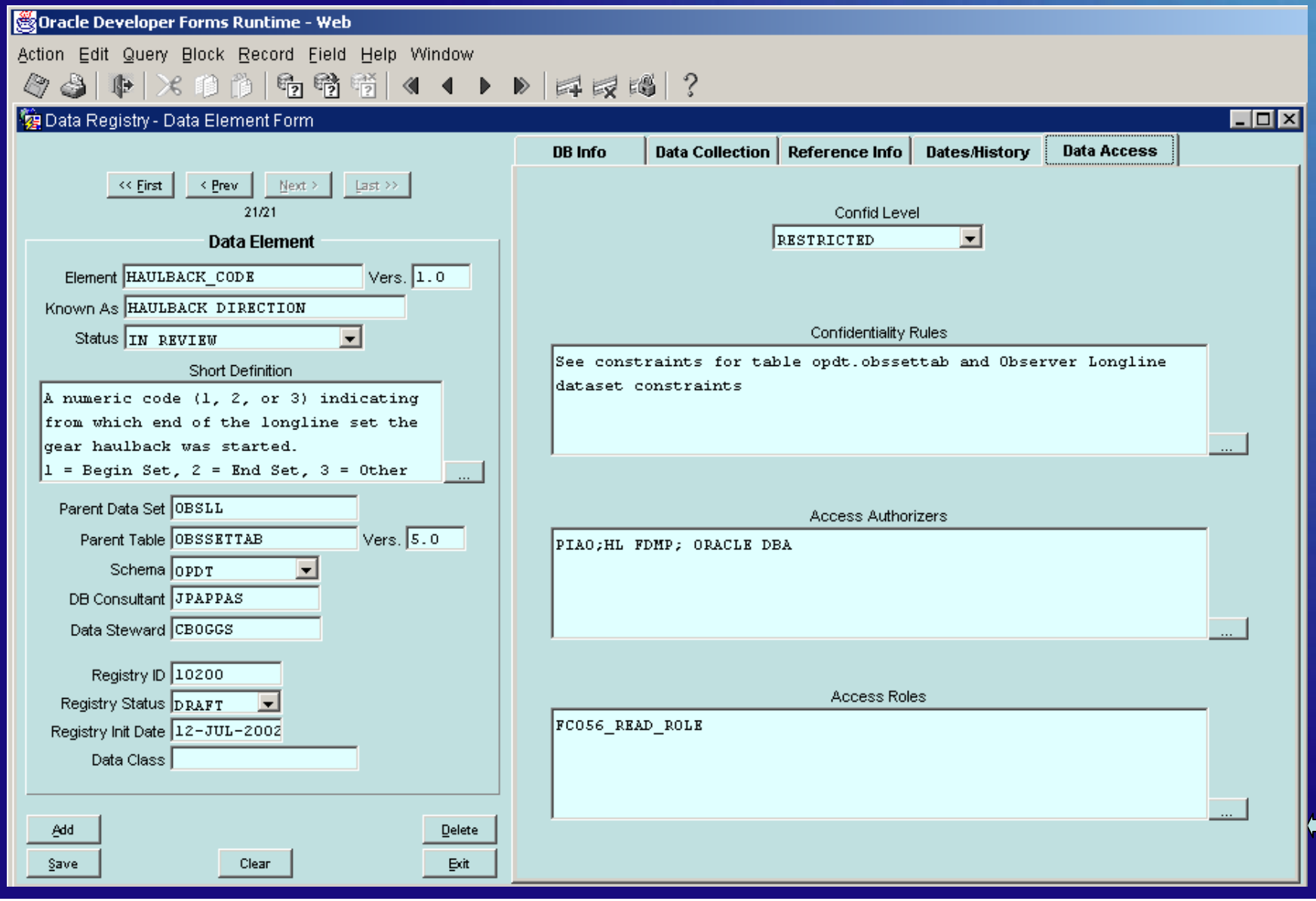
Data Element Registry
References Tab



Data Element Registry
History Tab



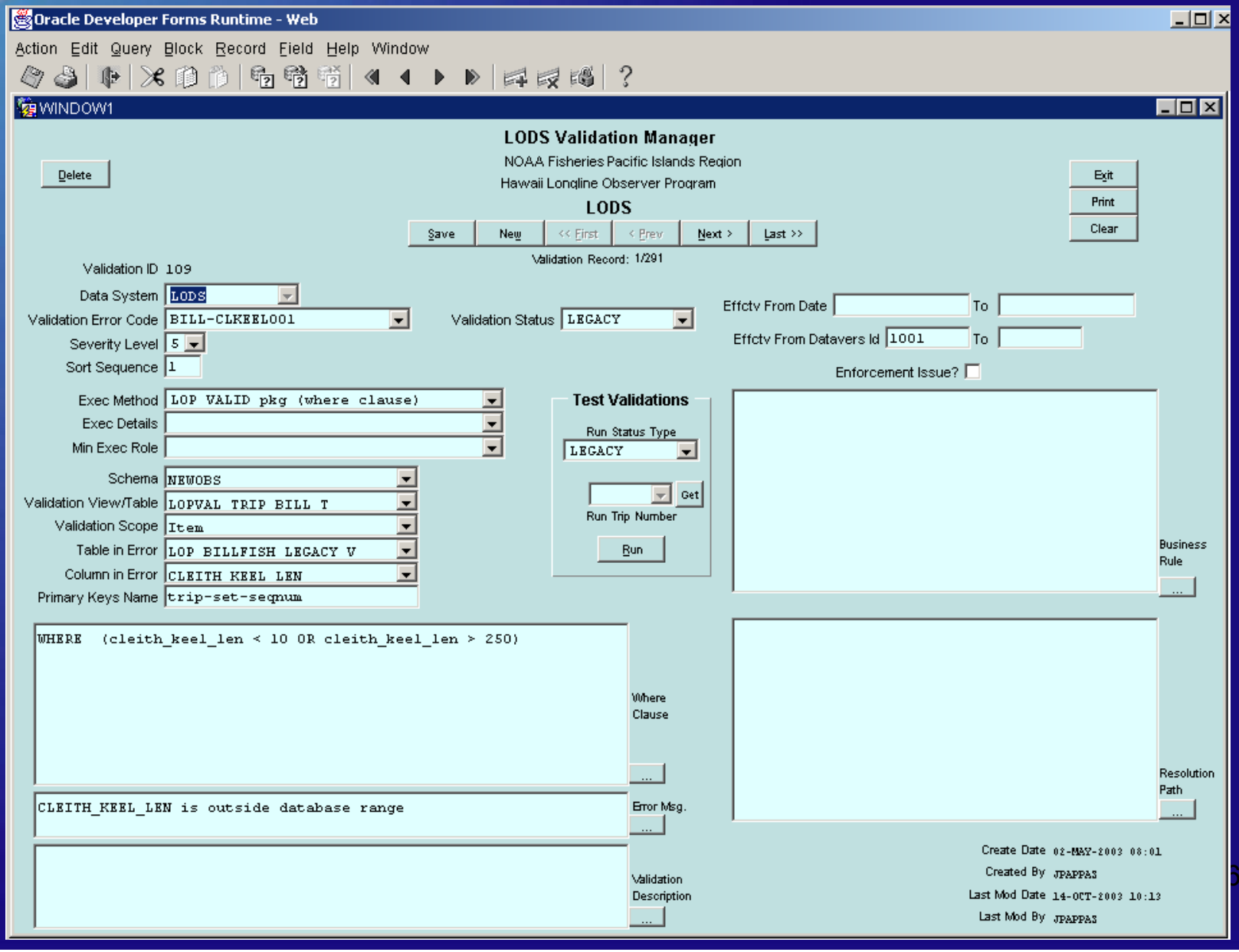
Data Element Registry
Data Access Tab



Accomplishments (cont.): LODS Applications

- LODS Home
- Data Entry Application
- Data Element Registry
- Data Validation Manager
- Data Issues Manager
- Reference Code Management
- LODS Admin

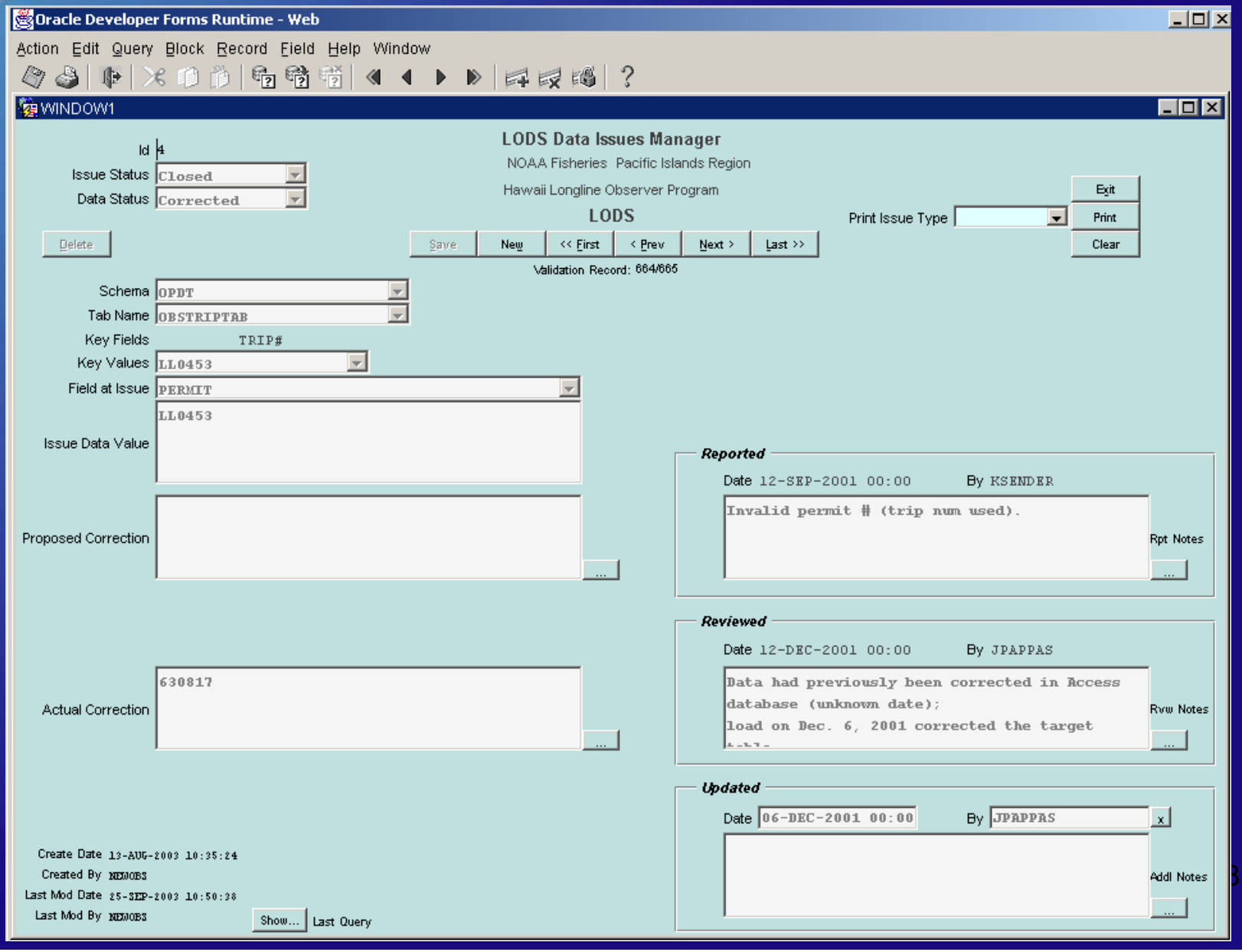
LODS Data Validation



Accomplishments (cont.): LODS Applications

- LODS Home
- Data Entry Application
- Data Element Registry
- Data Validation Manager
- Data Issues Manager
- Reference Code Management
- LODS Admin

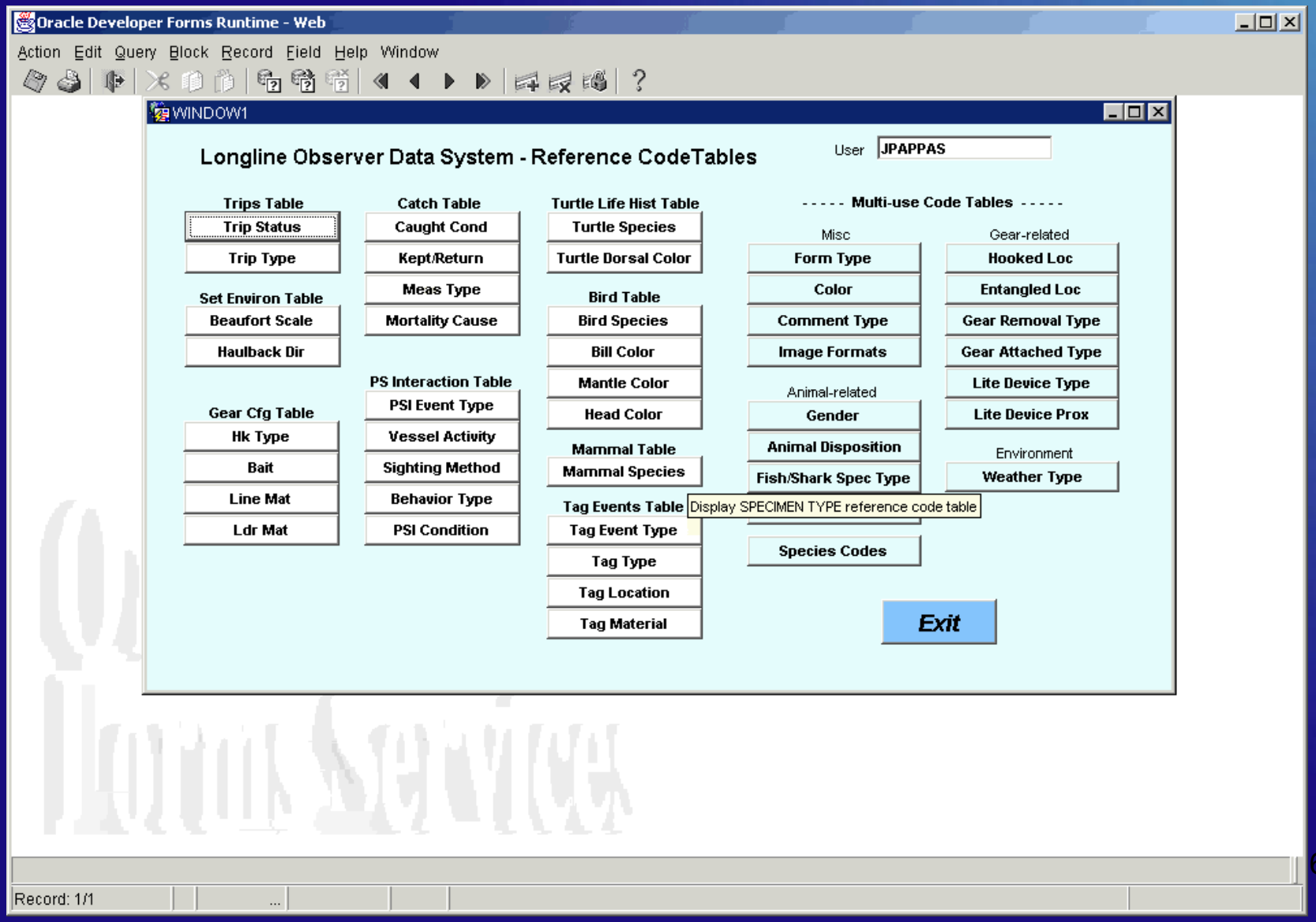
LODS Data Issues Manager



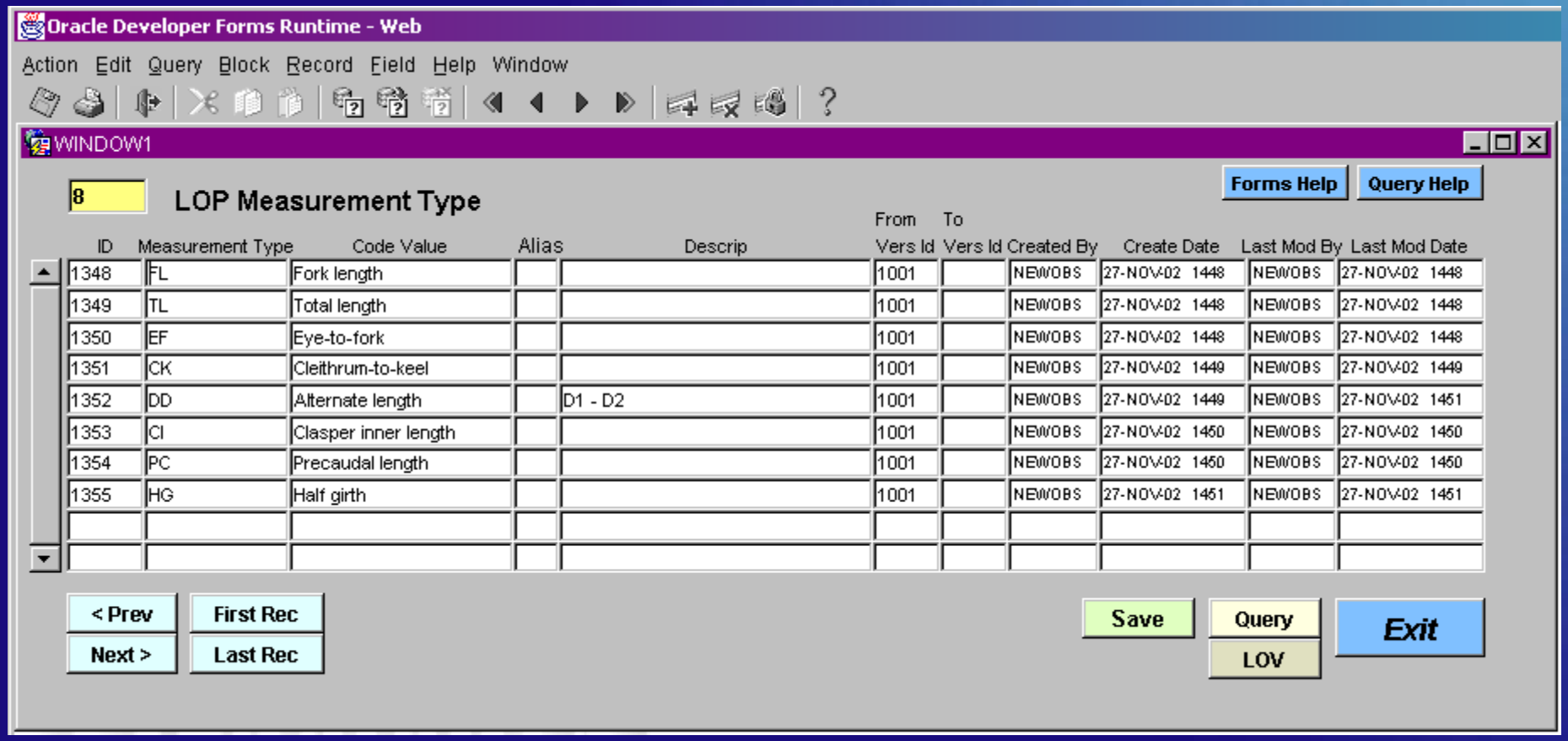
Accomplishments (cont.): LODS Applications

- LODS Home
- Data Entry Application
- Data Element Registry
- Data Validation Manager
- Data Issues Manager
- Reference Code Management
- LODS Admin

Reference Code Management

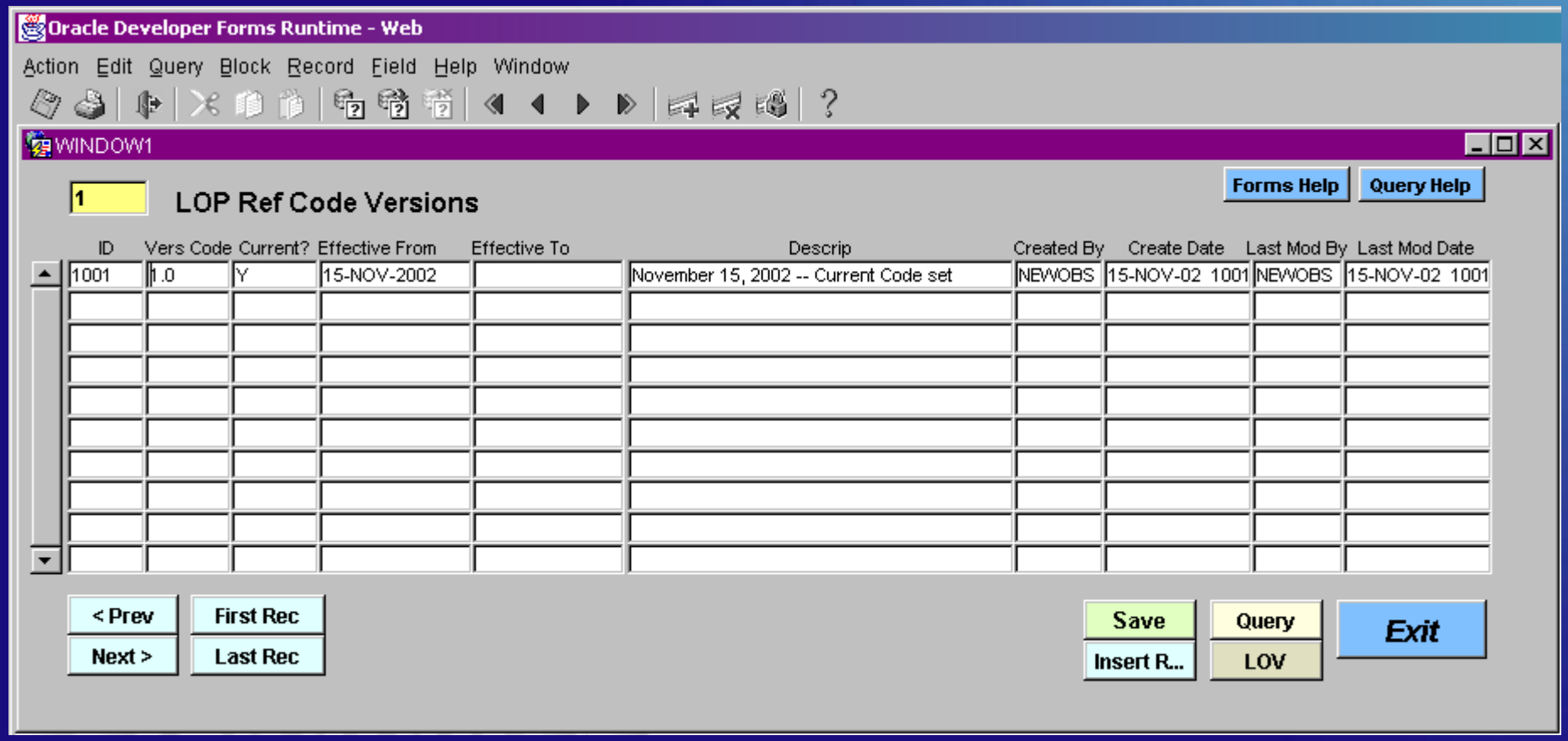


Measurement Type Codes



ID	Measurement Type	Code Value	Alias	Descrip	From Vers Id	To Vers Id	Created By	Create Date	Last Mod By	Last Mod Date
1348	FL	Fork length			1001		NEWOBS	27-NOV-02 1448	NEWOBS	27-NOV-02 1448
1349	TL	Total length			1001		NEWOBS	27-NOV-02 1448	NEWOBS	27-NOV-02 1448
1350	EF	Eye-to-fork			1001		NEWOBS	27-NOV-02 1448	NEWOBS	27-NOV-02 1448
1351	CK	Cleithrum-to-keel			1001		NEWOBS	27-NOV-02 1449	NEWOBS	27-NOV-02 1449
1352	DD	Alternate length		D1 - D2	1001		NEWOBS	27-NOV-02 1449	NEWOBS	27-NOV-02 1451
1353	CI	Clasper inner length			1001		NEWOBS	27-NOV-02 1450	NEWOBS	27-NOV-02 1450
1354	PC	Precaudal length			1001		NEWOBS	27-NOV-02 1450	NEWOBS	27-NOV-02 1450
1355	HG	Half girth			1001		NEWOBS	27-NOV-02 1451	NEWOBS	27-NOV-02 1451

Reference Code Versioning



Netscape 6

File Edit View Search Go Bookmarks Tasks Help

http://itsi.nmfs.hawaii.edu:7777/htdocs/lop/html/lods-codes.html

LODS Reference Codes

Printed on 14-OCT-2003 13:36:42

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LOP_AGE_CLASS
LOP_ANIMAL_DISPOSITION
LOP_BAIT
LOP_BEAUFORT
LOP_BEHAVIOR_TYPE
LOP_BIRD_BILL_COLOR
LOP_BIRD_HEAD_COLOR
LOP_BIRD_MANTLE_COLOR
LOP_BIRD_SPECIES
LOP_CAUGHT_COND
LOP_COLOR
LOP_COMMENT_TYPE
LOP_DAMAGE
LOP_ENTANGLED_LOC
LOP_FORM_TYPE
LOP_GEAR_ATTACHED_TYPE
LOP_GEAR_REMVL_TYPE
LOP_GENDER
LOP_HAULBK_DIR
LOP_HK_TYPE
LOP_HOOKED_LOC
LOP_IMAGE_FMTS
LOP_KEPT_RETURN
LOP_LDR_MAT
LOP_LINE_MAT
LOP_LITE_DEVICE_PROX
LOP_LITE_DEVICE_TYPE
LOP_MAMMAL_SPECIES
LOP_MEAS_TYPE
LOP_MORT_CAUSE
LOP_PSI_COND
LOP_PSI_EVENT_TYPE
LOP_PST_COND
LOP_PS_SPECIMEN_TYPE
LOP_SIGHTING_METHOD
LOP_SPECIMEN_TYPE
LOP_TAG_EVENT_TYPE
LOP_TAG_LOC
LOP_TAG_MAT
LOP_TAG_TYPE
LOP_TRIP_STATUS
LOP_TRIP_TYPE
LOP_TURT_DORSAL_COLOR
LOP_TURT_SPECIES
LOP_VESS_ACTIVITY
LOP_WEATHER_TYPE

LOP_AGE_CLASS

Ref Code	Alias	Code Value	Notes
01		Mature	
02		Immature	
03		Other	

Back to Top

LOP_ANIMAL_DISPOSITION

Ref Code	Alias	Code Value	Notes
01	1	Previously dead	
02	2	Released unharmed	
03	3	Released injured	
04	4	Died	
05	5	Escaped	
06	6	Treated as catch	
07	7	Other/Unknown	

Back to Top

LOP_BAIT

Ref Code	Alias	Code Value	Notes
01	1	Large squid	
02	2	Small squid	
03	3	Saury (sanma)	

Document: Done (1.141 secs)

Accomplishments (cont.): LODS Applications

- LODS Home
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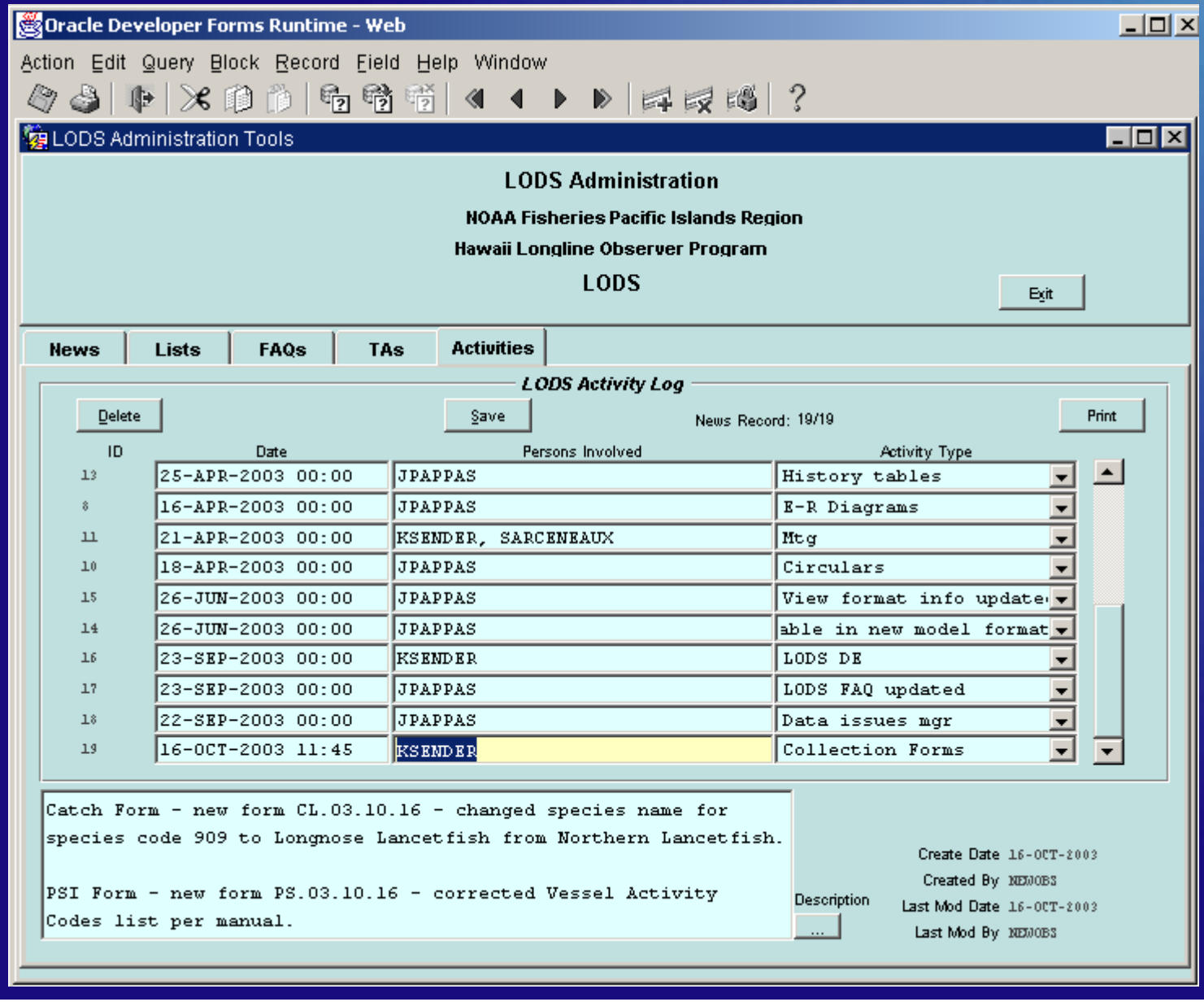
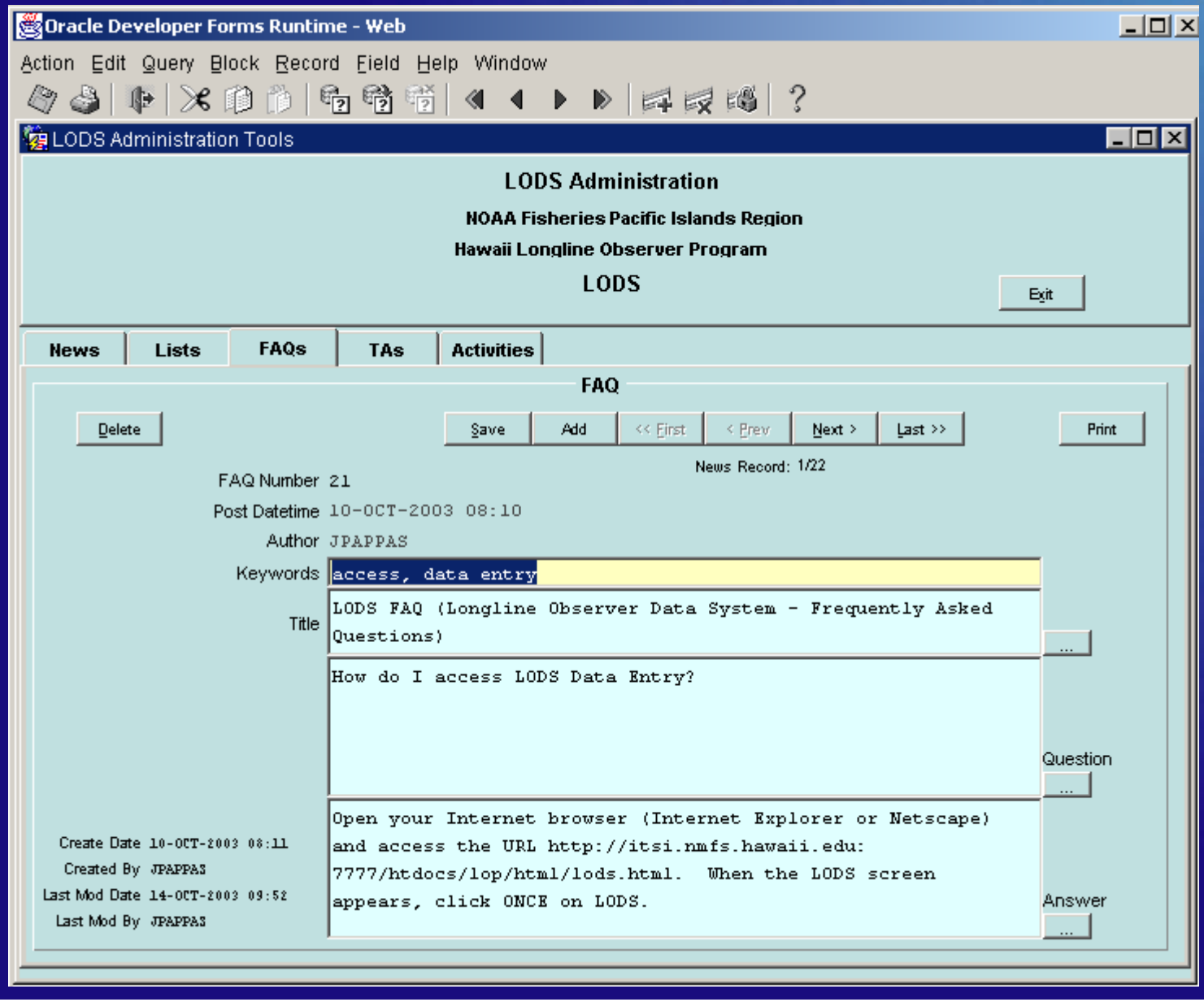
- Data Element Registry
- Data Validation Manager
- Data Issues Manager
- Reference Code Management
- LODS Admin

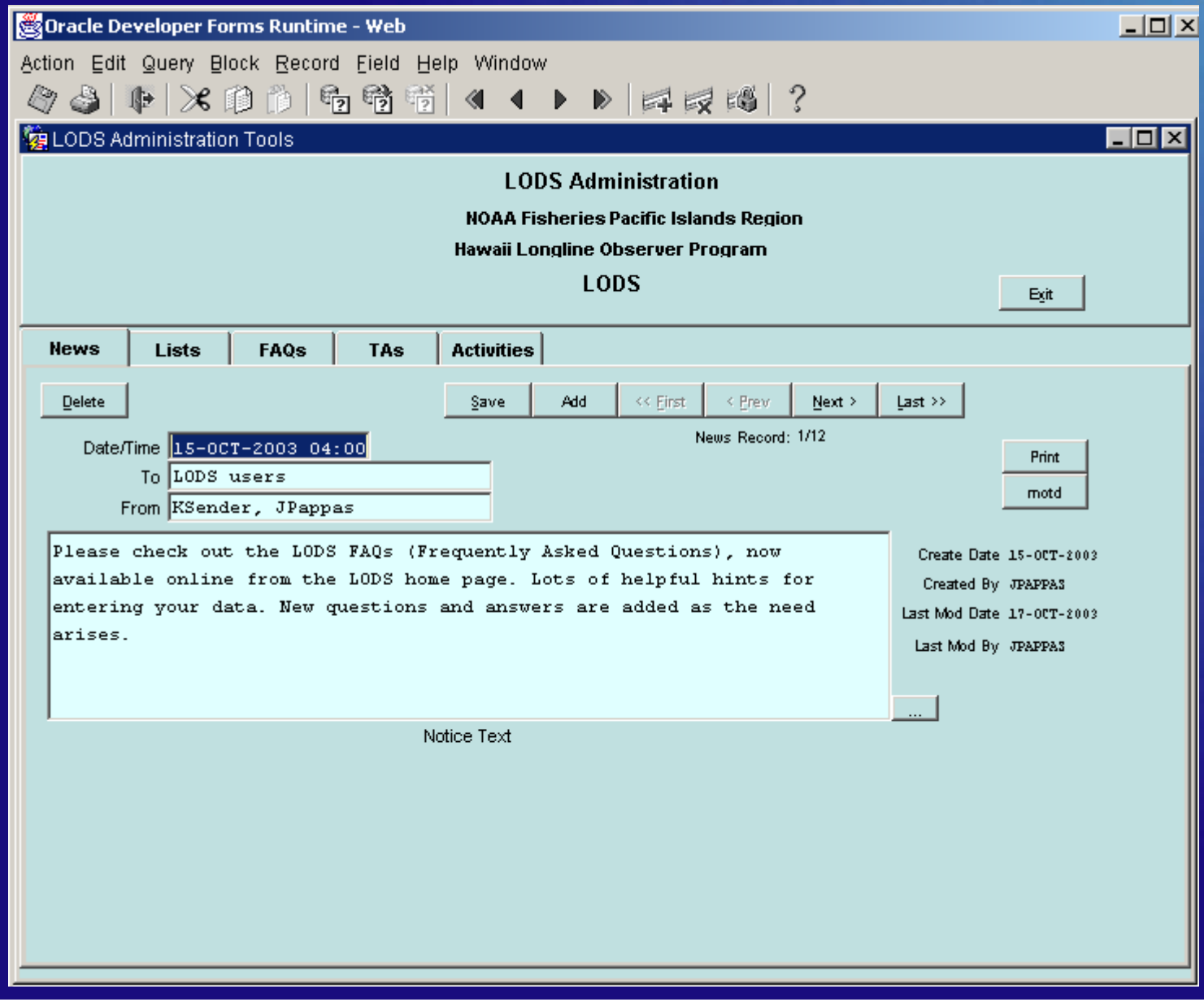
Project Activities Log



FAQ Manager


Oracle Developer Forms Runtime - Web
Action Edit Query Block Record Field Help Window
LODS Administration Tools
LODS Administration
NOAA Fisheries Pacific Islands Region
Hawaii Longline Observer Program
LODS
Exit
News
Lists
FAQs
TAs
Activities
FAQ
Delete
Save
Add
<< First
< Prev
Next >
Last >>
Print
News Record: 1/22
FAQ Number 21
Post Datetime 10-OCT-2003 08:10
Author JPAPPAS
Keywords access, data entry
Title LODS FAQ (Longline Observer Data System - Frequently Asked Questions)
How do I access LODS Data Entry?
Question
Open your Internet browser (Internet Explorer or Netscape) and access the URL http://itsi.nmfs.hawaii.edu:7777/htdocs/lop/html/lods.html. When the LODS screen appears, click ONCE on LODS.
Answer
Create Date 10-OCT-2003 08:11
Created By JPAPPAS
Last Mod Date 14-OCT-2003 09:52
Last Mod By JPAPPAS

LODS News


Oracle Developer Forms Runtime - Web
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Hawaii Longline Observer Program
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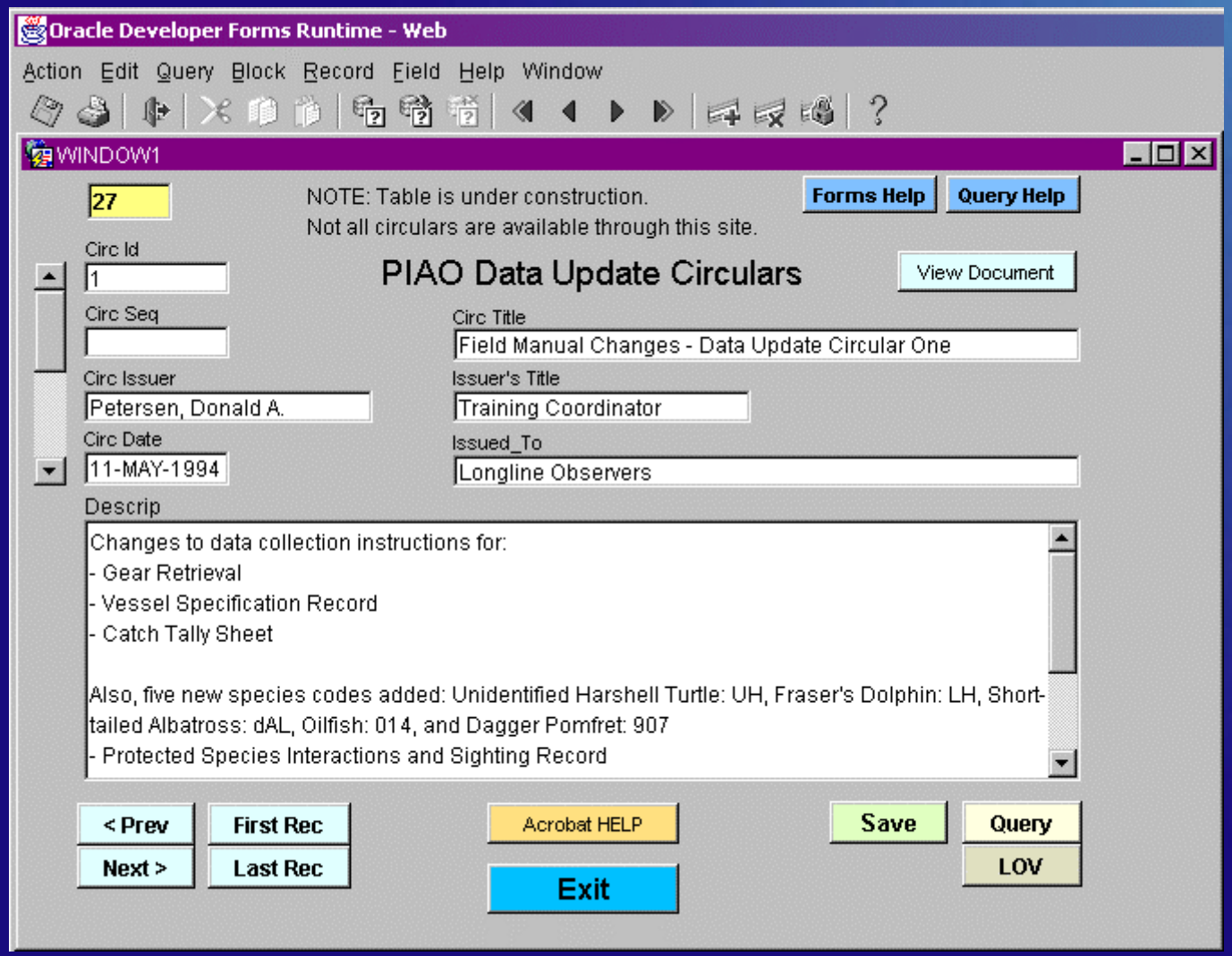
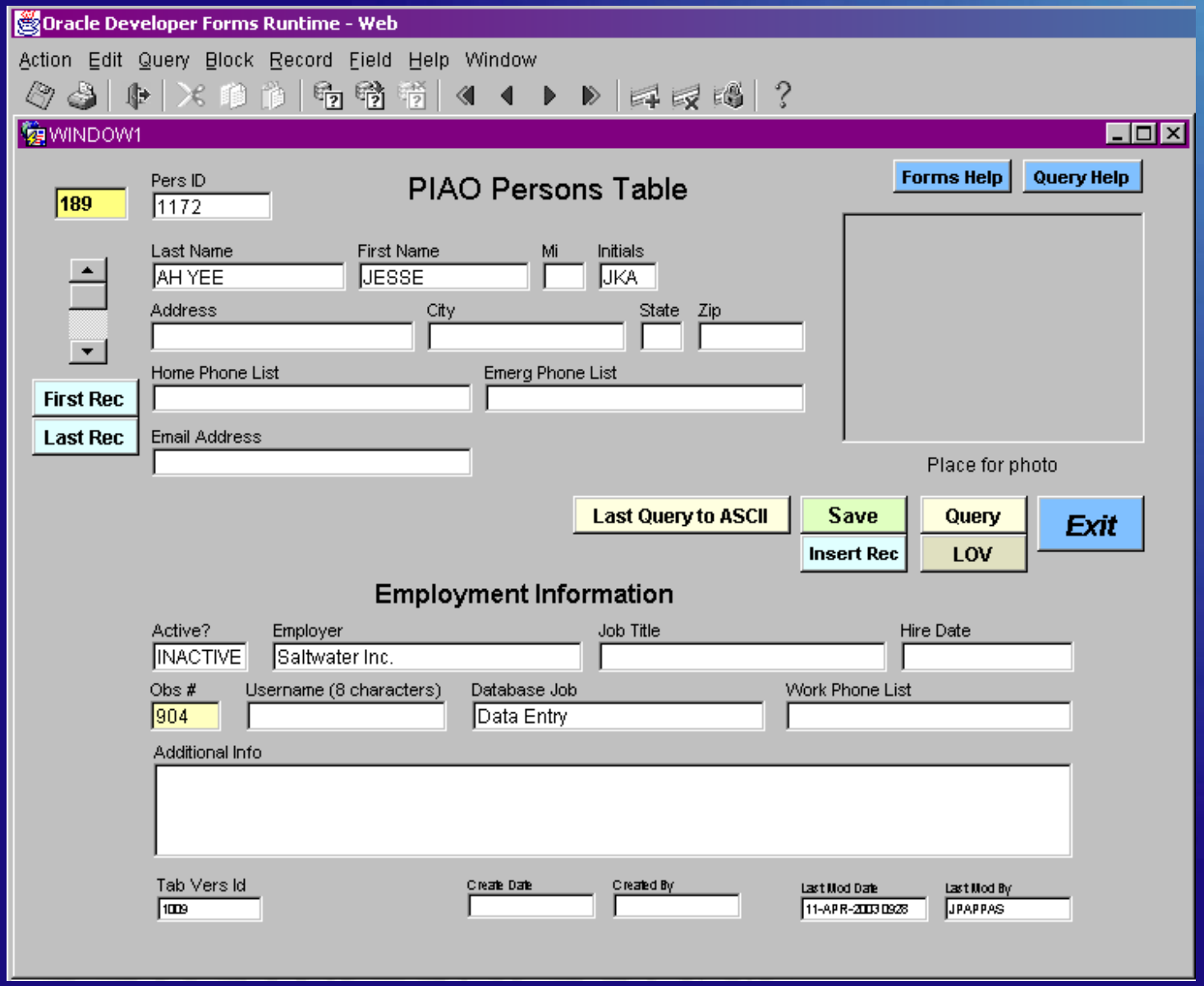
Exit
News
Lists
FAQs
TAs
Activities
Delete
Save
Add
<< First
< Prev
Next >
Last >>
News Record: 1/12
Date/Time 15-OCT-2003 04:00
To LODS users
From KSender, JPappas
Print
motd
Please check out the LODS FAQs (Frequently Asked Questions), now available online from the LODS home page. Lots of helpful hints for entering your data. New questions and answers are added as the need arises.
Create Date 15-OCT-2003
Created By JPAPPAS
Last Mod Date 17-OCT-2003
Last Mod By JPAPPAS
...
Notice Text

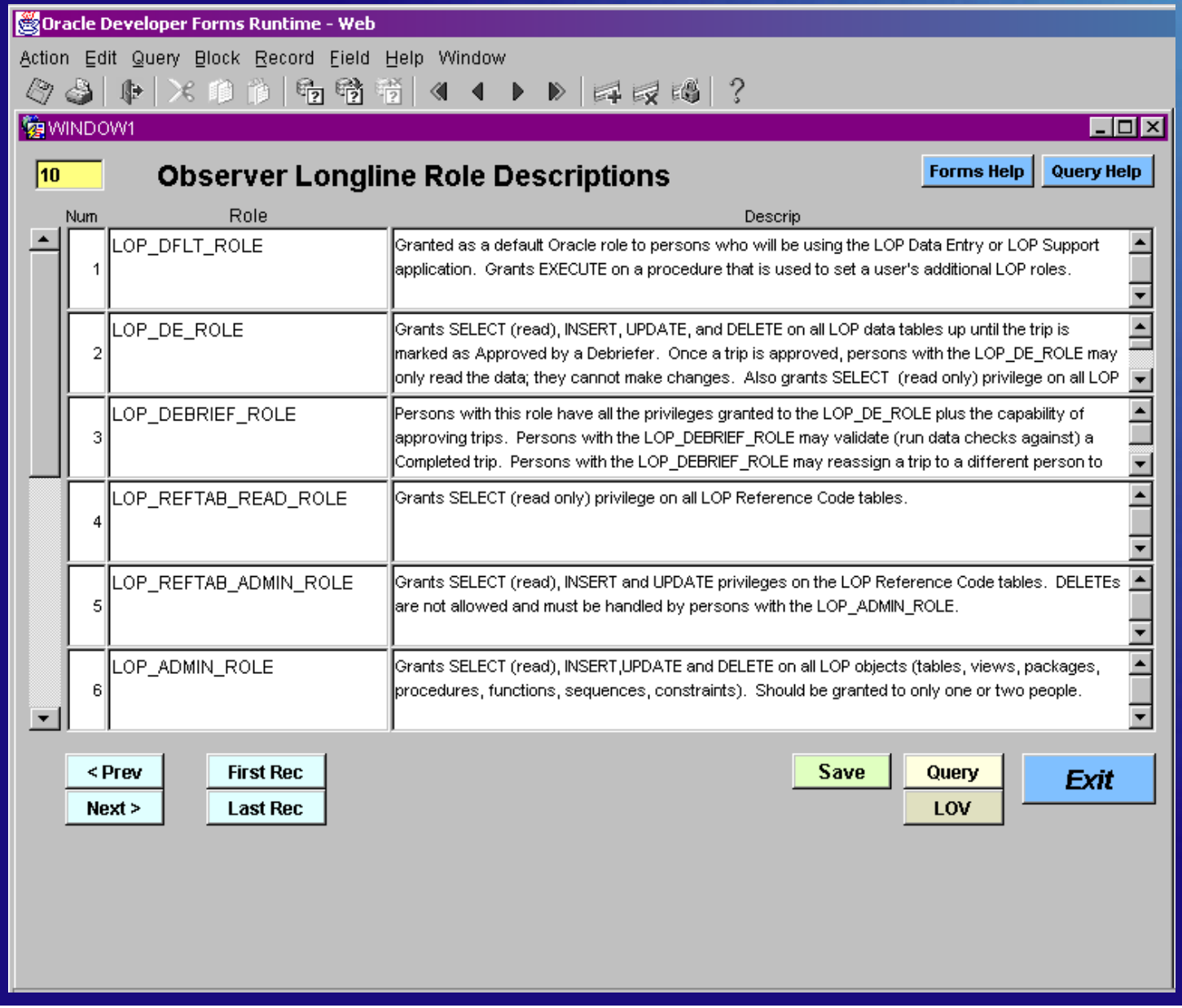
Project Circulars Management



Persons Management



Data Role Management



Species Code Management

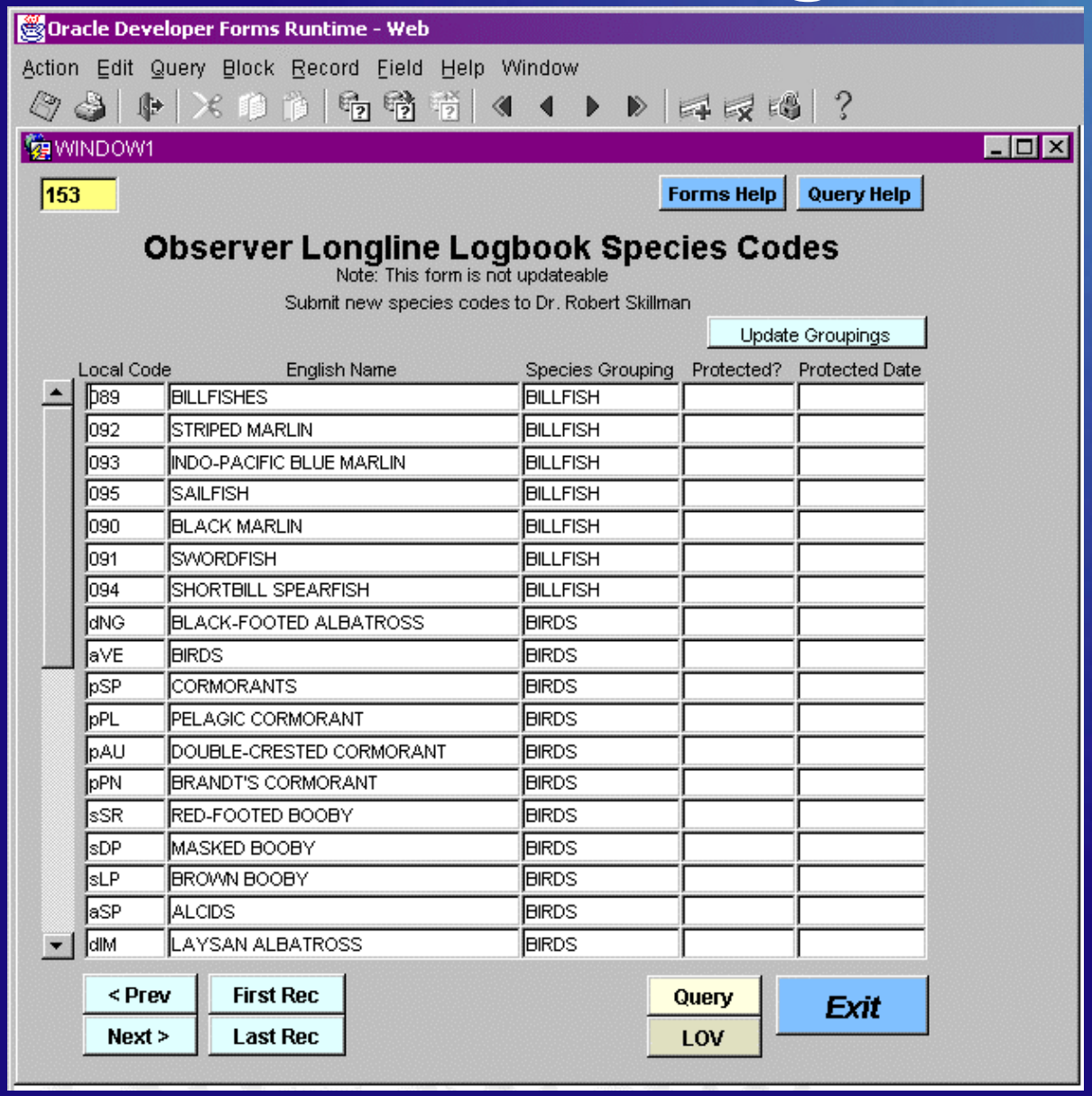
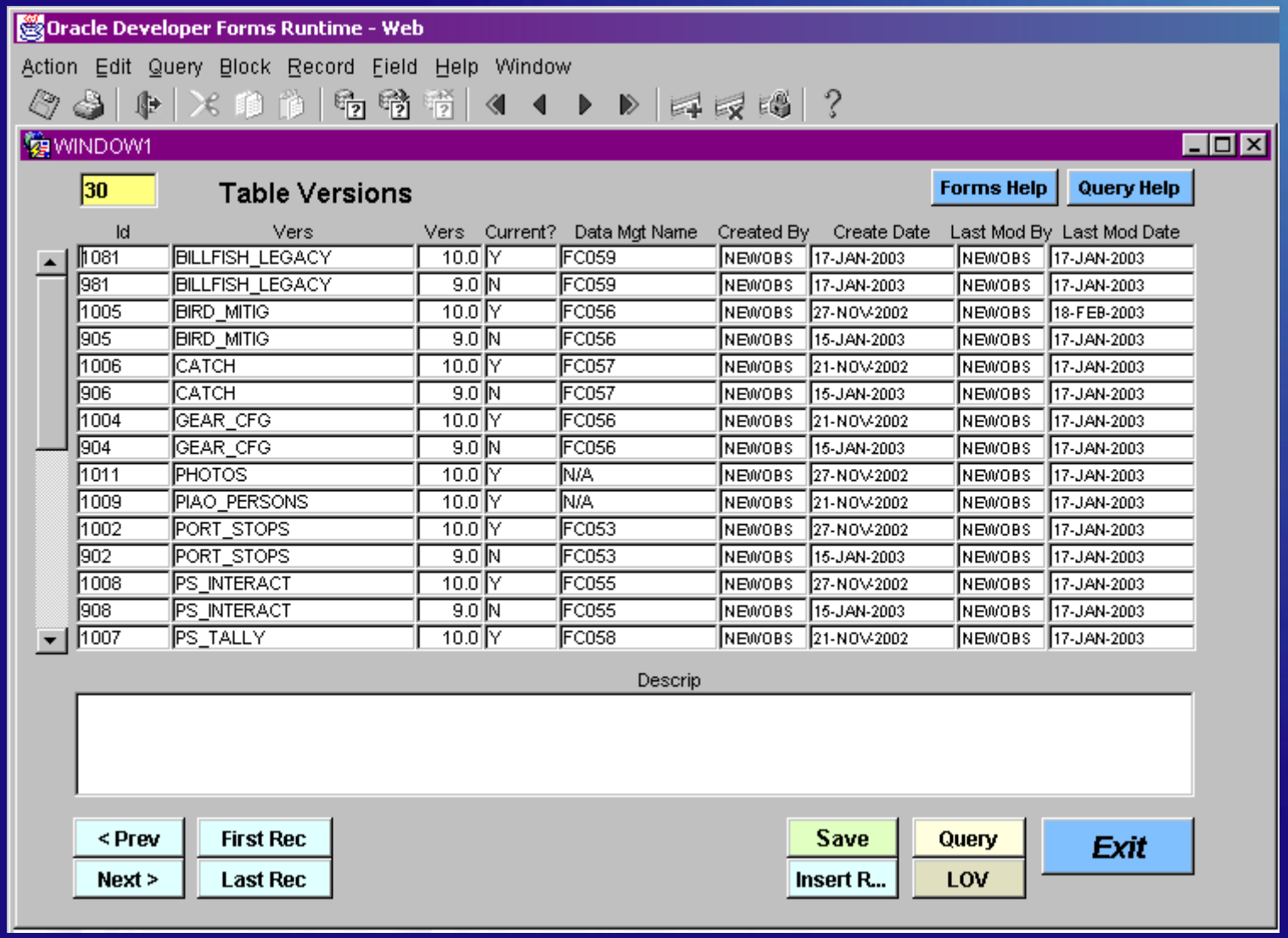


Table Version Management



Future Opportunities

- Apply tools and techniques developed for LODS to other data systems
- System process improvement from Issues Management and Data History statistics
- Integration of documentation tools and techniques into InPort metadata repository
- Work with FIS Professional Specialty Groups (PSG) to develop and promote NMFS data management best practices

Reviewing the Process

- Overcoming the politics of change

Reviewing the Process

- Overcoming the politics of change
- Doing it the *Hard Way*

Reviewing the Process

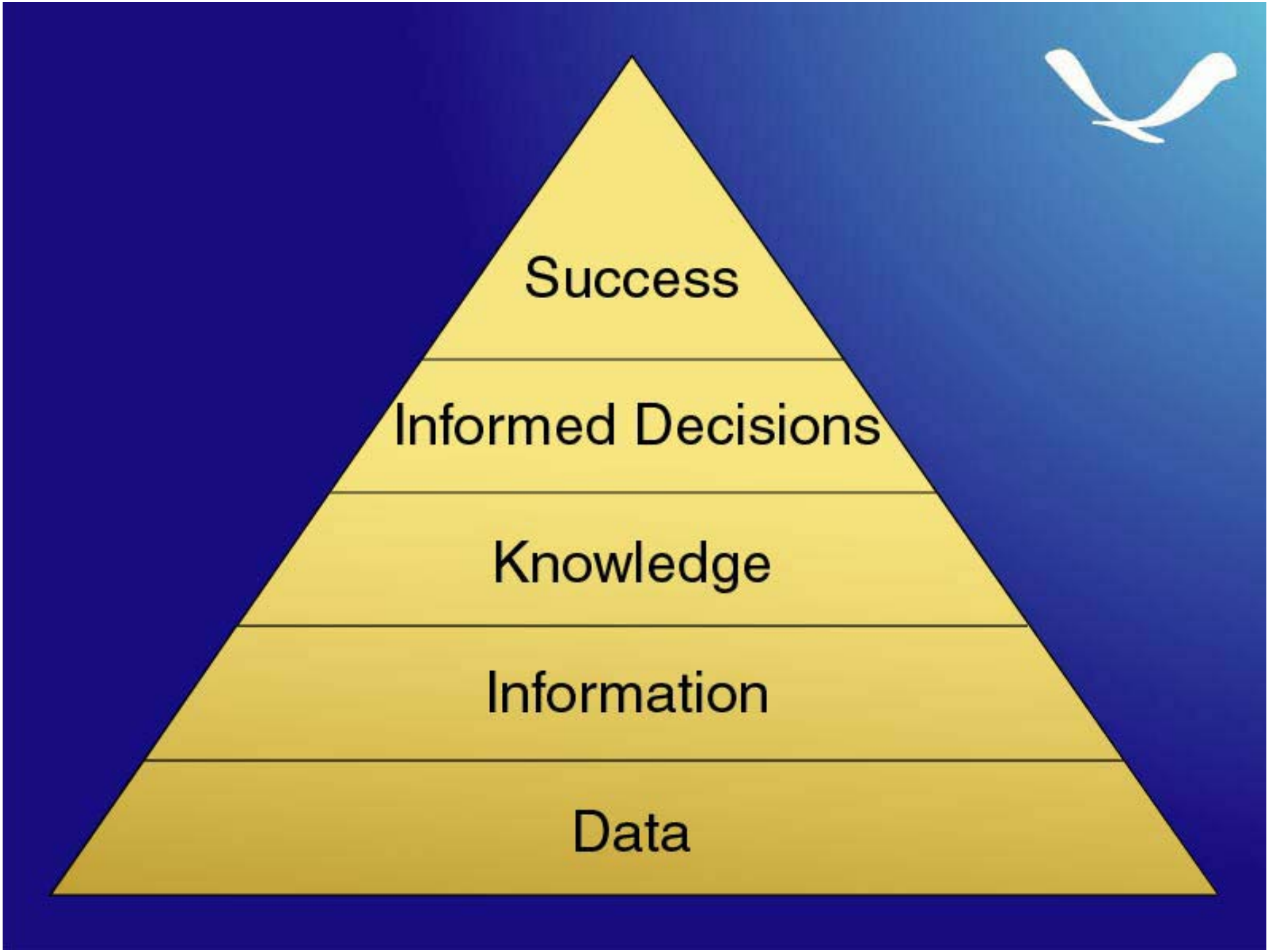
- Overcoming the politics of change
- Doing it the *Hard Way*
- FIS to the rescue

Everything I know, I learned at sea…

- Change happens, enjoy it!
- Passion and energy can often overcome a lack of resources
- If you want to keep the boat afloat, you need the whole crew
- If you want the boat to go in the right direction, you need a captain

Final Thoughts…

- The most accurate data are not defensible without adequate documentation
- Data management policies and guidelines need to be adopted
- Data management needs to be a forethought, not an afterthought when planning and budgeting projects
- Quality data management is not rocket science
- GIS, FGDC, NDQA, Data Integration require good data management


Success
Informed Decisions
Knowledge
Information
Data

End

Designing and Managing Fisheries Data Systems that Support the NOAA Data Quality Act: A Case Study Using the Hawaii Longline Observer Program

Karen Sender and Janet Pappas
NOAA Fisheries - Pacific Islands Fisheries Science Center
Honolulu, Hawaii

FIS Conference 2003
18 November 2003

Addendum

The following ten slides are presented to describe InPort, our working model of an integrated data registry and metadata repository

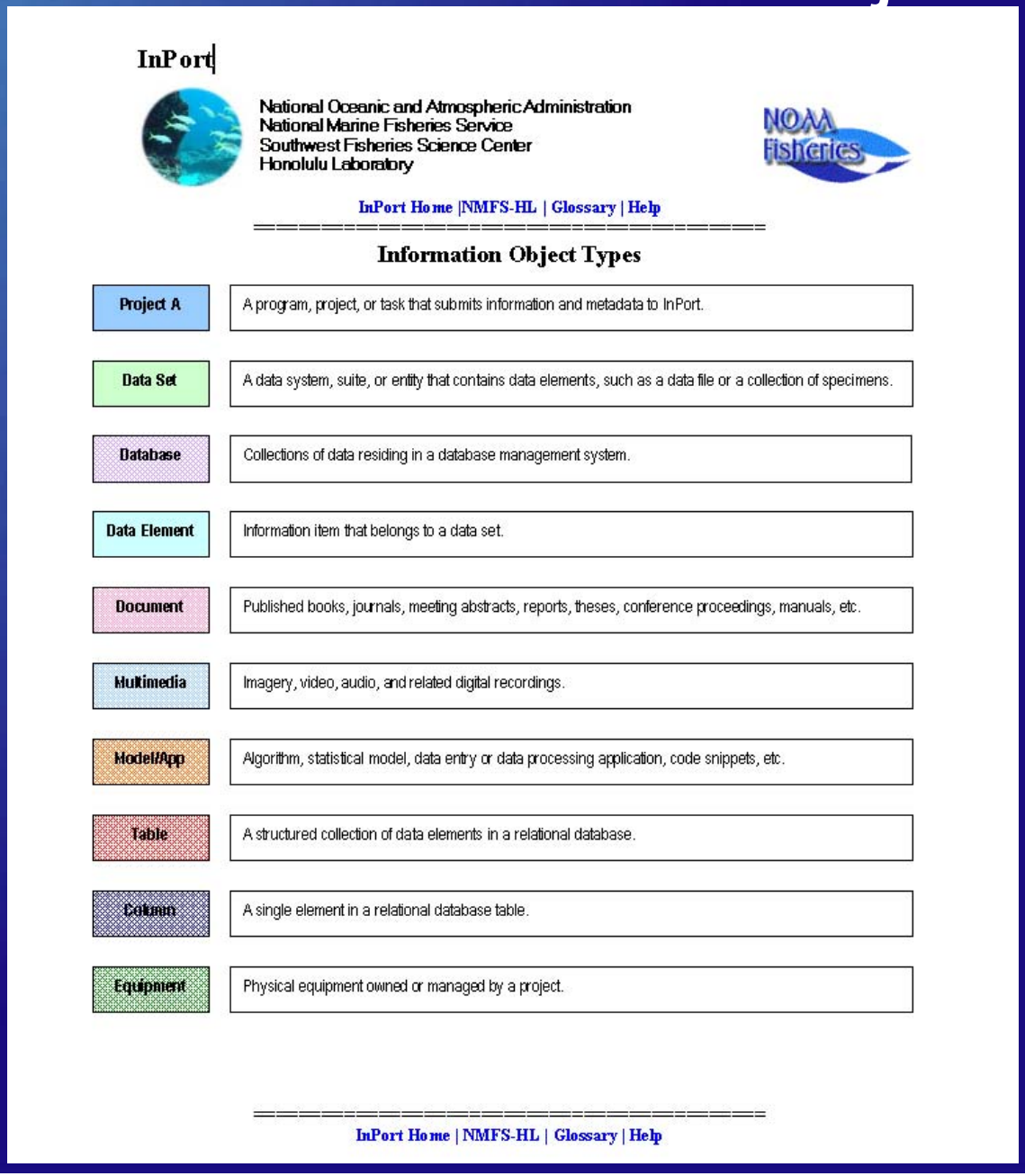
Karen Sender and Janet Pappas
NOAA Fisheries - Pacific Islands Fisheries Science Center
Honolulu, Hawaii

FIS Conference 2003
18 November 2003

InPort Metadata Repository

- Maintain a complete inventory of data
- Metadata are readily available on-line
- Automatically generate near final FGDC metadata records
- Reduce the waste of time and money
- Facilitate the sharing of data and information

InPort Information Objects



InPort

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
Honolulu Laboratory

InPort Home |NMFS-HL | Glossary | Help

Information Object Types

Project A	A program, project, or task that submits information and metadata to InPort.
Data Set	A data system, suite, or entity that contains data elements, such as a data file or a collection of specimens.
Database	Collections of data residing in a database management system.
Data Element	Information item that belongs to a data set.
Document	Published books, journals, meeting abstracts, reports, theses, conference proceedings, manuals, etc.
Multimedia	Imagery, video, audio, and related digital recordings.
Model/App	Algorithm, statistical model, data entry or data processing application, code snippets, etc.
Table	A structured collection of data elements in a relational database.
Column	A single element in a relational database table.
Equipment	Physical equipment owned or managed by a project.

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InPort Common Components

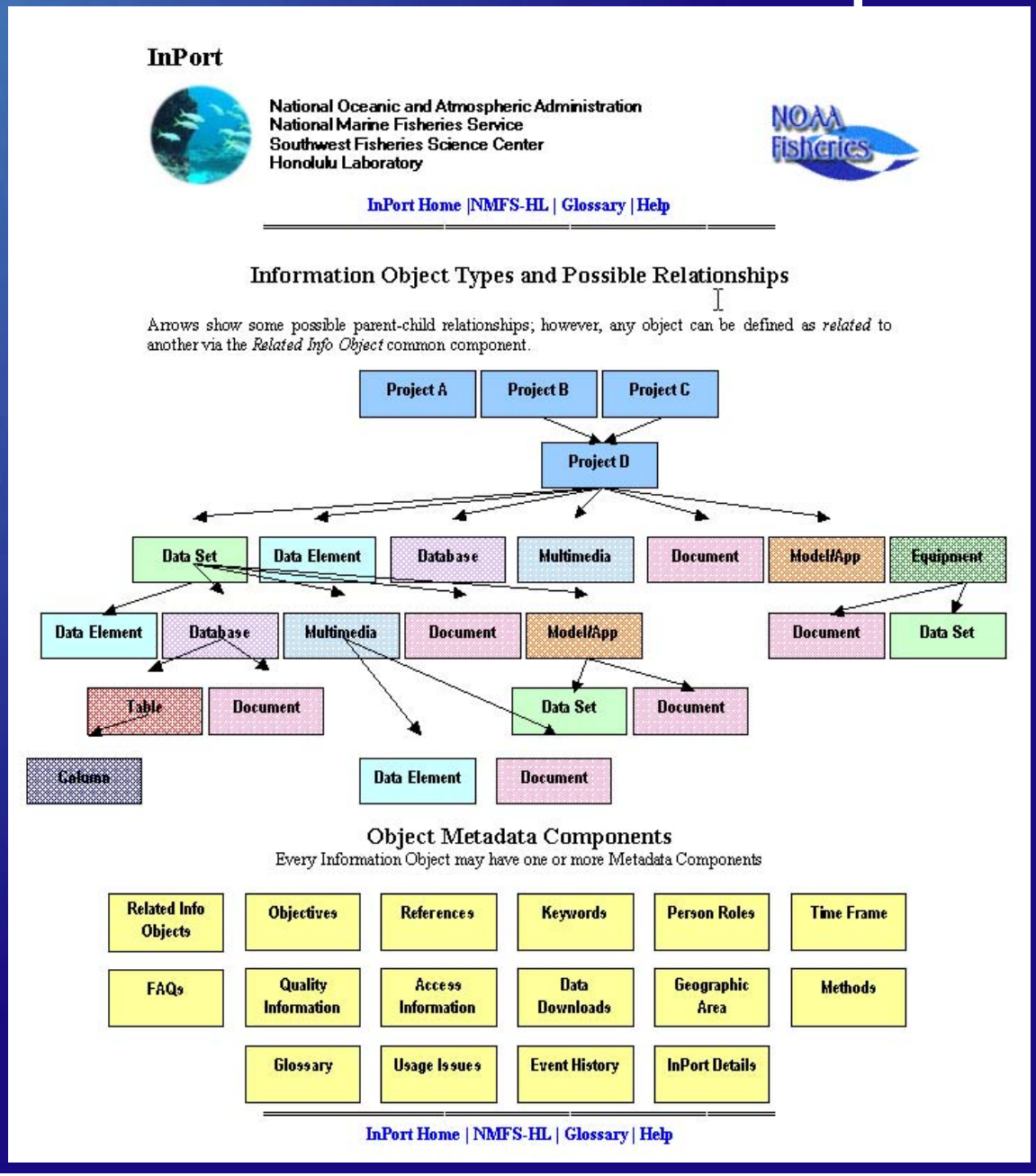
InPort

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
Honolulu Laboratory

Object Metadata Components

Related Info Objects	List of registered information objects that have a defined relationship to the information object.
Objectives	List of goals, objectives and reasons for acquiring, managing, or maintaining the information object.
References	List of laws, regulations, mandates, etc., pertaining to the information object.
Keywords	List of subject, place, taxonomic, or other theme keywords used to facilitate searching of information.
Person Roles	List of people and their roles in acquiring, managing, and using the information object.
Time Frame	Temporal limits of the information object which can be based on both time/date and an information item, (e.g. trip number).
FAQs	List of questions and answers that have been proven helpful to the understanding and use of the information object.
Quality Information	Details on usage constraints, completeness, and accuracy of the information object.
Access Information	Details on the access policy and access procedures of the information object.
Data Downloads	List of available files, images, and documents for the information object with details and links for obtaining them.
Geographic Area	Spatial bounds and geographic description of the information object.
Methods	List of methods, protocols, and procedures used to acquire, process or manage the information object.
Glossary	List of terms and definitions specific to the information object.
Usage Issues	List of problems, issues, concerns related to the information object.
Event History	List of events relating to the information object, including dates, event descriptions and person involved.
InPort Details	InPort administrative details for this information object.

InPort Relationships



InPort Main Page

InPort

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
Honolulu Laboratory

NOAA Fisheries

About InPort |NMFS-HL | Glossary | Help

==========

Honolulu Laboratory Information Portal

I

Search — Search InPort for information on projects, data, documents, applications, people, events, FAQ's, standards and equipment.

Publish — Publish information to the Honolulu Laboratory InPort system.

==========

About InPort | NMFS-HL | Glossary | Help

InPort Search

InPort

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
Honolulu Laboratory

InPort Home | NMFS-HL | Glossary | Help

Honolulu Laboratory Information Portal

Enter a search string. Optionally select a specific information type and information field as is available in the drop down lists.

Information Object Search

Information Type: Data Set

Search for: Observer in the: Title

Search

InPort Search Results

InPort

National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southwest Fisheries Science Center
Honolulu Laboratory

NOAA Fisheries

InPort Home | NMFS-HL | Glossary | Help

Search Results

2 Records Found

	Type	RegID #	Status	Title / Abstract
(1)	Data Set	2001	Active	Longline Observer Data Observation data collected on Longline Fisheries trips beginning in 1994.
(2)	Element	3001	Active	Longline Observer Trip Number Trip Number as recorded by Longline Observers, indicating the nth trip.

InPort Home | NMFS-HL | Glossary | Help

InPort Object Profile

Information Object Profile

Title: Longline Observer Data

Identification:

Registry ID: 2001
Registry Status: Reviewed

Version Date: 16 Oct 2002

Data Type: Data Set
Data Status: Active

Parent Object: 2005

Abstract: Observation data collected on Longline Fisheries trips beginning in 1994. The abstract will probably be much longer than this is.

Supplemental Information: Supplemental information on this object goes here in paragraph form. The supplemental information may be much longer than this is.

Objectives: Objectives go here in paragraph form. The objectives may be long.

Keywords (6)

Subject Keywords: Fisheries
Taxonomic Keywords: Tuna, Swordfish
Place Keywords: Palmyra, Jarvis, Hawaii

Time Frame

Start Date: 01/01/1994 **Start as of: Trip LL0001**
End Date:

Geographic Bounds

Bounding Coordinates in decimal degrees (positive North latitudes and Eastern longitudes):

Northern Boundary: 18.2345
Southern Boundary: -5.4321
Eastern Boundary: 155.0032
Western Boundary: -176.3333

References (1)

1. RegID CitationRecord goes here.

InPort Object Profile

Related Objects (2)

	Type	RegID #	Status	Title	Relationship Description
1.	Element	RegID	Reviewed	Trip#	Relationship information goes here.
2.	Document	RegID	Reviewed	Observer Data Collection Manual	Relationship information goes here.

Documents (2)

	Year	RegID #	Doc Type	Title
1.	1999	RegID	Article	Document Title Goes Here
2.	1998	RegID	Report	Observer Quarterly Report, 1998 Quarter 1

Methods (2)

	Type	RegID #	Status	Method Name
1.	Acquisition	RegID	Reviewed	Method Name1
2.	View	RegID	Reviewed	Method Name2

Quality Assurance

Data Use/Constraints: Description of use and constraints goes here in paragraph form.

Roles (2)

Name: Janet Pappas
Org: NMFS/SWFSC/HL
Role: DBA
Primary Phone: 808-983-5309 **Alternate Phone:**
Mobile Phone: **Pager:**
Fax: 808-983-2922
Primary email: janet.pappas@noaa.gov
Alternate email: jpappas@swfc2.hawaii.edu

Name: Karen L. Sender
Org: NMFS/JIMAR
Role: Application Developer
Primary Phone: 808-983-5387 **Alternate Phone:**
Mobile Phone: 808-256-7483 **Pager:** 808-256-7483
Fax: 808-983-2922
Primary email: karen.sender@noaa.gov
Alternate email: ksender@swfc2.hawaii.edu

InPort Object Profile

Access Information

Availability: Confidential
Access Policy: Summary data may be available, based on a minimum of boats in a given area for a given time period.
Access Procedures: Contact the data manager.

Data Access (2)

1. File Name: obs.xls
   File Description:
   File Type: MS Excel
   Application Vers. Office 2000
   File Size (KB): 13.2
   File Last Write Date: 10/20/2002
   Compression Status: ZIP
   Access Connection: HTTP

   View/Download

2. File Name: obs.csv
   File Description: Comma separated values.
   File Type: ASCII
   Application Vers.:
   File Size (KB): 13.2
   File Last Write Date: 10/20/2002
   Compression Status: ZIP
   Access Connection: FTP

   View/Download

Additional Information

FAQ's | Terminology | Object History | Calendar

InPort Registry Details

Information Type: Data
Information Status: Active
Entry Date: 10/09/2002
Release Date: 10/26/2002
Retire Date:
Data Entry Person: JP

Subtype: Data Set
Revision Date:
Review Date: 10/09/2003

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